

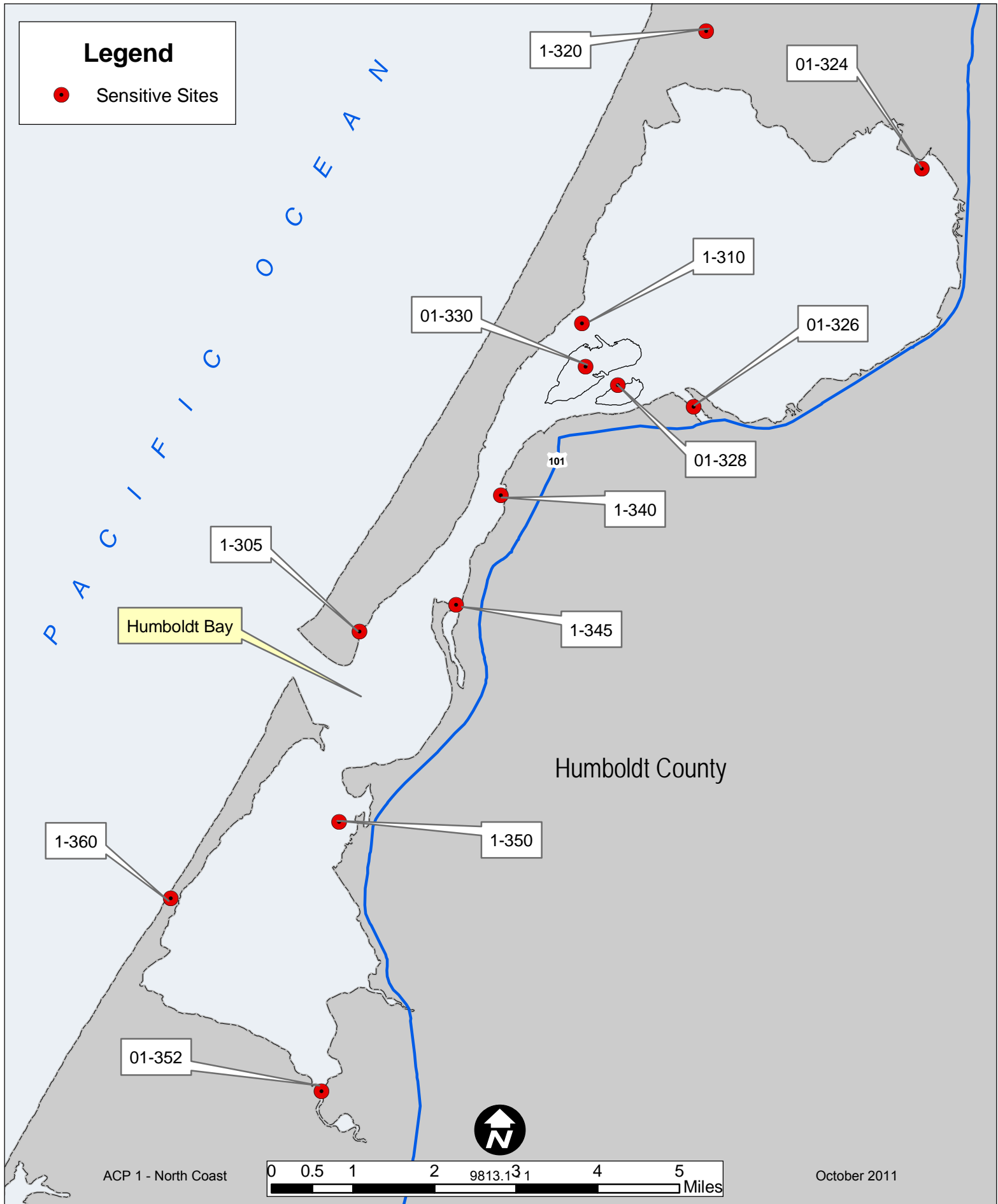


ACP 1 HUMBOLDT BAY SENSITIVE SITES



Legend

● Sensitive Sites



9813.1 Humboldt Bay

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HUMBOLDT BAY GEOGRAPHIC RESPONSE PLAN

This insert into the North Coast Area Contingency Plan may also serve as a removable field guide during an oil spill response.

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Important Information

Please complete this page and make a **copy for the situation unit before going into the field.**

SPILL NAME: _____

Your name: _____ Organization _____

Phone _____ Cellular _____ Pager _____ Radio Call Sign _____

Your Assignment _____

EMERGENCIES: Highway Patrol, Sheriff, Police, Medical,911

	Location or Person	Phone #	Cellular #	Pager #
Your Supervisors				
Command Center				
Operations				
Planning				
Logistics				
Safety Officer				

HUMBOLDT BAY GEOGRAPHIC RESPONSE PLAN

INTRODUCTION

General Description: Humboldt Bay is a large tidally influenced coastal lagoon with very little freshwater input. The Bay is separated from the ocean by long sand spits with an entrance channel artificially stabilized by concrete dolosse. The Bay consists of three segments: 1) North Bay (Arcata Bay); 2) South Bay; and, 3) Entrance Bay/North Bay Channel. North and South Bays are both characterized by extensive tidal mud flats with more than 1/2 of each exposed at low tides. They are extensively interlaced with drainage channels and have important wildlife and commercial mariculture value. The Entrance Bay/North Bay channel area is a relatively narrow, deeper central area, and is the industrialized portion of the shoreline.

Currents: The circulation of Humboldt Bay water is almost entirely tidally driven. South Bay's water exchange rate amounts to 60% of its Mean High Water (MHW) volume, and North Bay's rate of exchange averages 44% of its MHW volume. Measurements have shown that 75% of the water entering and exiting North Bay passes through the Samoa Channel. Complete water exchange estimates vary, but 14 tidal cycles, or about 7.5 days, seems likely.

These large volume exchange rates result in high-velocity tidal currents. The following data were obtained from Boyd, et al., 1992 and were reported as unpublished data, but seem supportable based upon the experience of mariners on the Bay.

North Bay channel.....	3.0kts
Entrance to South Bay.....	2.0kts
Entrance Channel.....	3.3kts
Eureka Inner Reach.....	1.0kts

Because 75% of the water entering North Bay does so through the Samoa Channel, it seems likely the currents here approach 3 knots.

Hydrology: Freshwater discharge into the bay represents very little of the daily tidal exchange and probably has only a localized effect (Boyd, et. al. 1992, unpublished). Surrounding foothills provide a small drainage basin of about 222 sq mi (578 km²), with 85% of the water draining to either North Bay, or to Entrance Bay/North Bay channel from the Elk River. About 12% falls as precipitation directly on the Bay and the remainder is runoff into South Bay. Salinity transects done following heavy rainfall have shown most freshwater runoff from North Bay streams to be discharging to the center of the Bay via the inner reach from North Bay. Elk River runoff was quickly mixed with Bay water near Elk River. Only minor depressions in salinity could be found in transects done in South Bay and at the location where South Bay meets Entrance Bay.

Humboldt Bay tides are called mixed tides because there is a major low, a minor high, a minor low, and a major high tide (not necessarily in this order) within each approximate 25 hour period. Greatest current velocities occur during changes from major high to major low or vice versa. **All response supervisors should have tidal prediction charts to ensure personnel safety and to aid in response activities.**

TIDEGATES: Historically, low elevation lands around Humboldt Bay and the lower Eel River delta were diked and drained to reclaim former tidelands for agricultural use and development. Levees were constructed and water control structures were installed modifying hydrology of tidally influenced habitats and reducing the overall size of Humboldt Bay significantly.

There are hundreds of water control structures around Humboldt Bay including tidegates, culverts, flash board risers, and standpipes that may allow oil to pass into sensitive wetland and saltmarsh habitats if not closed or protected. An inventory of these structures was completed by USFWS in 2007 and a spatial database now exists. This information may be relevant in the event of a spill within the Humboldt Bay vicinity to protect private properties and important habitats. While there is no universal strategy to protect water control structures due to the variety of designs and conditions, having an inventory of the locations, structure types, condition, and landowner is critical in planning for a response. Based on a site visit by a contractor during response, a site specific strategy can be developed to protect individual water control structures using a number of techniques (i.e. manually closing a tidegate, installing hard or sorbent boom, installing visqueen and/or sandbag barriers, etc.).

The data is available on the Department of Fish and Game's CalFish internet mapserver website (<http://imaps.dfg.ca.gov/viewers/calfish/app.asp?zoomtoBookmark=1079>). For more information, contact the USFWS Arcata Field Office (<http://www.fws.gov/arcata/>).

RESPONSE: Response to any oil spill on Humboldt Bay must be a coordinated, pre-planned attack to contain and recover the oil as close to the source of the spill as possible. If the source of a spill is in Entrance Bay/North Bay Channel, this may be the only way to protect both North and South Bays. The characteristics described for North and South Bays make spill response operations within these two areas of the Bay almost impossible except for some tidal inlets accessible by highways along the margins of the Bay. Neither North Bay nor South Bay has a good location where oil can be collected and recovered and water depths are generally insufficient for on-water collection.

Oranges, lemons and rice hulls have been used as drogues to gauge the trajectory of oil spilled in Humboldt Bay. Experiments have shown that it is possible for oil released from Entrance Bay or the Chevron fuel terminal at the beginning of a flood tide to reach North Bay during the first flood tide cycle. It is also likely to be carried into South Bay on the first tide cycle if the incident were to occur along the South Jetty. It is also likely that oil would also enter Elk River on the first flood tide cycle for any incident that occurred at the South Jetty or in Entrance Bay. Spilled oil would not likely reach small stream inlets to North or South Bay until several tide cycles had passed.

Experiments demonstrated that on successive tides most oranges became stranded along the western shoreline of the Bay between the Samoa Bridge and the USCG boat station. A few stranded in the vicinity of Palco Marsh. If the stranded oranges had been a persistent type oil, they would have likely been re-floated by successive tides and transported towards North Humboldt Bay.

This Geographic Response Plan recommends a timely and orderly progression of steps that can be taken to contain and recover as much oil as possible within the industrialized portions of the Bay, protect those sensitive wildlife habitats adjoining this part of the Bay, and begin setting-up protective strategies for North and South Bays. These strategies are meant to serve as a guide that will help drive response planning before a spill has occurred and during the

early stages of a spill. The strategies should be modified to fit environmental conditions (predicted tide heights, stage of tide, wind, amount of freshwater runoff, etc.) extant at the time of the spill.

This plan does not deal with the most immediate concerns of human health and safety, stopping the spill at its source, and containment at the source. Individual response plans deal with these issues.

The following table sets priorities for response at specific locations, explains the objective of the response, and lists the obvious (but not all) equipment needs. Maps of the Bay showing recommended response locations, and blank maps for responder use, follow. These strategies will help to contain spilled oil within the developed part of the Bay (our primary objective) and help to prevent its spread to North and South Bays.

These same strategies and their order of implementation can be effective at any stage of either a flood, or ebb tide, for any incident occurring between the entrance channel and Chevron's marine terminal, the likely route on which a large incident would occur. Oil spilled at or near the entrance can be expected to reach areas identified with the numeral '1' on the first flood tide after the spill. Those areas numbered '2' should encounter oil on the second flood tide. Those numbered '3' should encounter oil on the 3rd, or subsequent, flood tides.

Tabular Response Strategies

Humboldt Bay Geographic Response Plan

Priority	Response Locations	Objective	Equipment Estimates
1 Bay Entrance & North Bay Channel	Palco Marsh (1-340.1) (1-340.3)	Install pre-fitted splash boards into the water gate to prevent tidal exchanges	Splash boards are stored at the Chevron Terminal in Eureka Use sorbents as appropriate
	(1-340.2)	Ensure the Del Norte Street tidal gates are free from debris	Debris hooks, shovels, pry-bar, pitchfork
	Elk River & Marsh (1-345.1) (1-345.4)	Shut key-locked drop gates; boom Elk River mouth to prevent tidal movement of oil	Keys from City of Eureka or Chevron Terminal; 2400' harbor Boom, 8 anchors, 1 skiff, 4 workers
	Incident specific on water recovery	Recover oil using the pre-staged MSRC shuttle barge	Shuttle barge, workboat, crews & all operational ancillary components
	Inner Samoa Peninsula collection points (1-305.2)	Boom to direct oil into natural debris collection areas of the bay	4 work boats, 2000' hard boom, 10 anchors, 2x 4 person crews, 2 functional skimmer systems & waste storage collection
1 Samoa Channel	Indian Island (1-330.1)	Deflect oil away from Island.	500' harbor boom, 2 skiffs & 10 workers
	North Bay (1-310.2)	Direct oil with boom to a skimmer.	3500' harbor boom, SPS, & 10 workers.
1 South Bay	South Humboldt Bay (1-350.1)	Deploy boom to strand oil on shore.	1200' harbor boom, work boats, skimmers & 10 workers
	South Humboldt Bay (1-350.2)	On water recovery	SBS, 100' boom, 2 skiffs and their operators
2 Samoa Channel	North Humboldt Bay (1-310.3)	Recover oil by diverting to shore based skimming	2000' harbor boom, in <400' segments, 1 skimmer & storage, 1 skiff, 4 workers
	Elk River (1-345.2)	Recover oil. Stop oil movement up river.	1400' harbor boom, 300' sorbent boom, 1 skiff, 1 skimmer & storage, 10 workers
2 Indian & Woodley Islands / Eureka Channel	Woodley Island (1-328.2)	Deflect oil from Indian Island to Woodley Island	1200' harbor boom, 1 boom boat, 10 workers
	Woodley Island (1-328.1)	Deflect oil from Eureka channel to skimmer at Woodley Island	1200' harbor boom, 1 skiff, 10 workers, 1 skimmer & storage

Tabular Response Strategies

Humboldt Bay Geographic Response Plan

Priority	Response Locations	Objective	Equipment Estimates
3 North (Arcata) Bay	Mad River Slough (1-320.1) (1-320.2)	Prevent oil from entering the slough and recover oil if possible	1200' hard boom, 1200' sorbent boom, 100' S boom, anchors, stakes, skimmer & storage, 6 workers, & hand tools.
	Jacoby Creek (1-324.1)	Prevent oil from entering the creek	500' hard boom, 100' sorbent boom, 100' S boom, anchors, stakes, 6 workers, & hand tools.
	Gannon Slough (1-324.2)	Prevent oil from entering the slough	500' hard boom, 100' sorbent boom, 100' S boom, anchors, stakes, 6 workers, & hand tools.
	Butcher Slough (1-324.3)	Prevent oil from entering the slough	300' hard boom, 100' sorbent boom, 50' S boom, anchors, stakes, 6 workers, & hand tools.
	McDaniel Slough (1-324.4)	Prevent oil from entering the slough	150' hard boom, 50' sorbent boom, 50' S boom, anchors, stakes, 6 workers, & hand tools.
	Eureka Slough (1-326.1) (1-326.2)	Prevent oil from entering the slough, and recover oil if possible.	1000' hard boom, 200' sorbent boom, 1200' S boom, skiff, anchors, stakes, 10 workers, & hand tools. Skimmer & storage as needed
3 South Bay	White Slough & Salmon Creek (1-352.1)	Prevent oil from entering the slough	600' of hard boom, skiff, anchors, Stakes, 6 workers, hand tools

Figure 1. Humboldt Bay GRP - Access Points



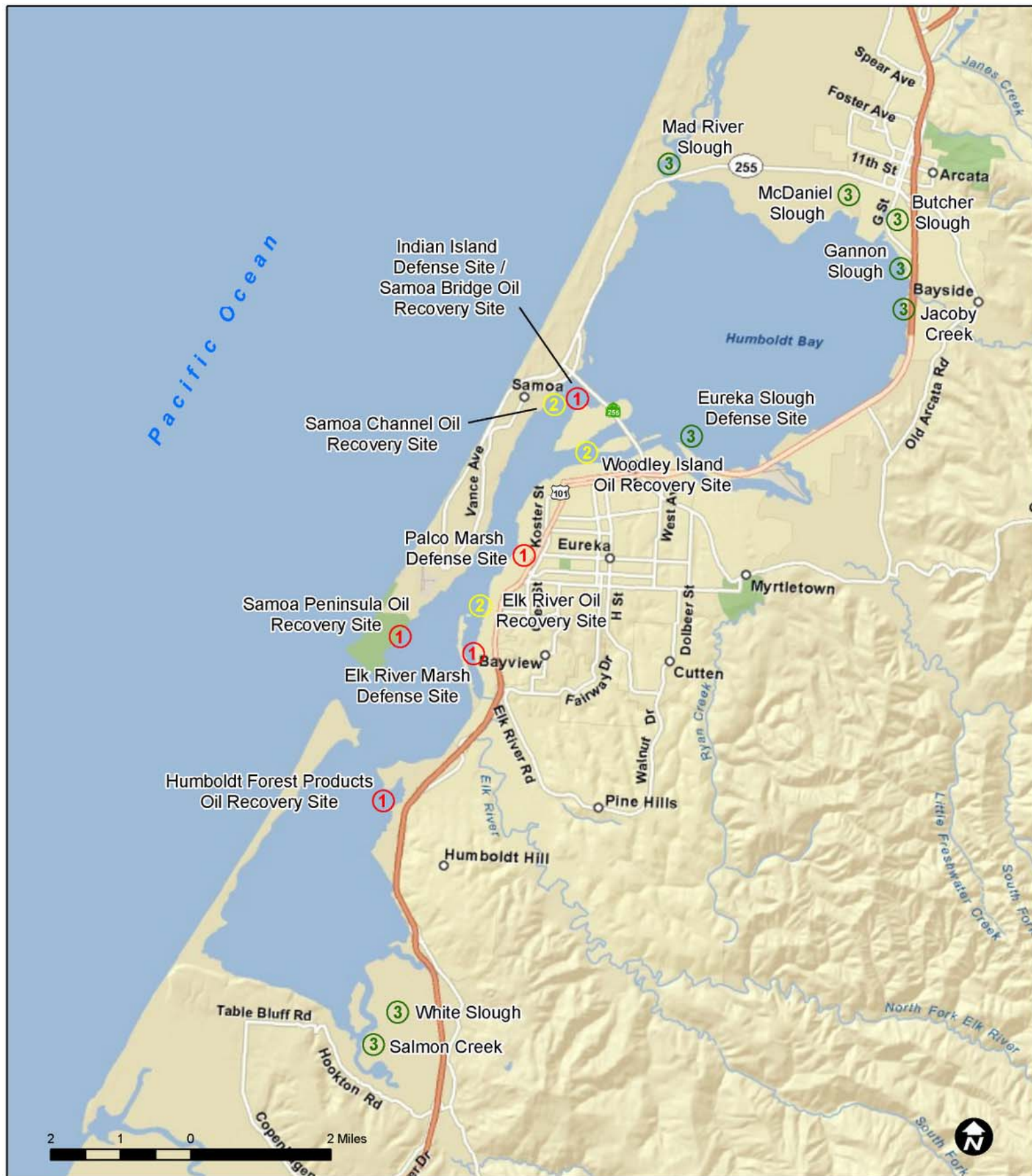
Waterfront Access for Spill Response.

1. Redwood Marine Terminal. Take L-P Drive off New Navy Base Rd.
2. California Redwood Company Wharf. Take L-P Drive off New Navy Base Rd.
3. Simpson Chip Export Dock. Take L-P Drive off New Navy Base Rd.
4. Zerlang Dock and Boat Yard. Bay St. off New Navy Base Rd.
5. Fairhaven Terminal. 2nd right turn off Bay St., off New Navy Base Rd. leads to 24 hour gate with guard. Good staging area with easy access from town of Fairhaven. See gate guard. Fire Dept. at Fairhaven also has a key to this staging area.
6. Road access to beach. Left turn onto Lincoln Avenue off New Navy Base Road at town of Fairhaven, about 4 miles S. of State HWY 255 (Samoa bridge). Turn right on Park Street or Duprey Street and continue to beach.
7. Samoa Boat Ramp (Humboldt County Parks, public launching ramp). Left turn off New Navy Base road about 4.5 miles S. of State HWY 255 (Samoa Bridge).
8. USCG boat station pier. About 5 miles S. of State HWY 255 (Samoa Bridge) on New Navy Base Road.
9. City of Eureka launching ramp. Off Waterfront Drive under Samoa bridge.
 - City of Eureka, Bonnie Gool Dock and J Street Pier.
 - Caito Fisheries, I Street wharf.
 - Fishermans Cooperative Wharf. Foot of D and F Streets extended.
 - Humboldt Bay Harbor Cruise dock. Foot of C Streets extended.
 - Coast Seafood pier. Foot of A and D Streets extended.
 - Eureka Ice and Cold Storage Wharf. Foot of A Street extended.
10. City of Eureka, Commercial Street wharf. Foot of Commercial Street.
 - City of Eureka, Small craft harbor and launching ramp.
 - City of Eureka, Humboldt Dock B. Foot of Washington Street extended north.
 - Pacific Affiliates Dock. Foot of Washington Street extended south.
 - Unocal Eureka Wharf. Foot of 14th street extended north.
 - Sierra Pacific Eureka Dock. Foot of 14th street.
11. City of Eureka, Del Norte Street public fishing pier. Foot of Del Norte Street.
12. Chevron USA, Eureka Terminal. Foot of Truesdale Street.
13. King Salmon. Private launching facilities. Shoreline access. King Salmon exit from US Hwy 101 about 2 miles S. of Eureka.
14. Humboldt Bay Forest Products wharf. G Street, Fields Landing.
 - South Bay Marina Fields Landing Pier.
 - Eureka Fisheries wharf G Street, Fields Landing.
 - Fields Landing Boat Ramp. Railroad Ave, Fields Landing.
 - Fields Landing Terminal. Depot Road, Fields Landing.

Useful Contact Numbers

NAME	PHONE NUMBER	24-HOUR NUMBER
Aqua-Rodeo Farms	707.444.3854	
Arcata Police Dept	707.822.2428	707.822.2424
Caito Fisheries	707.443.0550	707.441.4044 (Eureka PD)
CA Coastal Commission, North Coast District Office	707.445.7833	
CA Coastal Commission, Oil Spill Program	415.904.5205 (Deputy Director)	415.693.8375 (24-hour cell phone)
CA Dept of Fish and Game	707.445.6493	916.358.1300
CA Highway Patrol	707.822.5981	707.268.2000
Chevron Terminal	707.444.7850	707.441.4044 (Eureka PD)
Coast Seafood	707.442.2947	707.441.4044 (Eureka PD)
Eureka Police Department	707.441.4044	707.441.4044
Humboldt Bay Harbor, Recreation, and Conservation District	707.443.0801	707.443.0801
Humboldt Bay Oyster Company	707.442.2727	707.499.2388
Humboldt County Office of Emergency Services	707.268.2500	707.445.7251 (Sheriff)
Humboldt County Environmental Health	707.445..6215	707.445.7251 (Sheriff)
Humboldt County Sheriff	707.445.7251	707.445.7251
Humboldt Fisherman's Marketing Association	707.443.0537	
Humboldt State Marine Lab	707.826.3671	707.826.5555
Kuiper Mariculture	707.444.3185	707.499.8839
Kuiper, Ted	707.822.9057	
Marine Spill Response Corporation	800.645.7745	800.259.6772
National Response Corporation	707.441.0723	800.899.4672
Northbay Shellfish Company	707.839.4723	707.839.4723
Other Docks	707.441.4044 (EPD) 707.445.7251 (Sheriff)	707.441.4044 (EPD) 707.445.7251 (Sheriff)
Pacific Choice Seafoods	707.442.2981	707.441.4044 (Eureka PD)
PG&E Humboldt Bay Power Plant	707.445.6545	707.444.0822
Sierra Pacific Industries	707.443.3111	707.445.7251 (Sheriff)
Table Bluff Tribal Council	707.733.5055	707.733.5055
Taylor Mariculture	707.444.3185	707.499.8839
USFWS Humboldt Bay Refuge	707.733.5406	707.498.5406
USCG Air Station	707.839.6113	707.839.6113
USCG Boat Station	707.443.2213	707.443.2213

Figure 2. Humboldt Geographic Response Plan - All Priorities and Response Locations



County: **Humboldt**

USGS Quad:

Thomas Guide Location
CA Road Atlas

NOAA Chart:

Latitude N Longitude W
40 45' 30"N 124 13' 45"W

Last Page Update :

SITE DESCRIPTION:

This response site extends from the cove directly north of the Samoa public launch ramp and campground south about one quarter mile including beaches inside of the USCG Station. The public campground and launching ramp facility should be utilized as the staging area of operations for response crews working at this site. The campground and boat launch are managed by Humboldt County Parks. The Samoa spit beaches near the mouth of the bay contain a series of coves or pocket beaches where floating debris will naturally be deposited by eddies formed by the outgoing tidal currents. Accumulation of floating debris can be enhanced by the addition of short lengths of boom that extend from shore out into the current.

SEASONAL and SPECIAL RESOURCE CONCERN

High bird use area year round.

RESOURCES OF PRIMARY CONCERN

The resources that are at risk that can be protected using this strategy are the offshore marine birds, waterfowl, and marine mammals that can be impacted if floating oil leaves the bay on an out going tide. Resources inside of the bay include cultured oysters, waterfowl, and encrusting intertidal organisms.

Brant and other migratory waterfowl, waterbirds and shorebirds occur in the fall, winter, and spring (some year round). In winter it is not unusual for over 100,000 birds to use the Bay as a feeding or resting site. Offshore birds that are threatened when there is oil in the bay include marbled murrelets (FT,SE), tufted puffins (SSC), brown pelicans, ducks, gulls, etc.

Marine mammals found in the bay include on occasion, whales, but more typically only harbor seals.

Anadromous salmonids:

Coho (FT,ST) and Chinook (FT) salmon, Steelhead (FT) and Coastal cutthroat (SSC) trouts:

- spawning runs (08-06)
- juveniles/smolts (02-08)

Humboldt Bay Pacific Oyster (*Crassostrea gigas*) aquaculture. The north bay is home to a large and commercially successful oyster seed production and smaller grow out operation. Care should be taken to minimize impacts to these resources.

Extensive eel grass beds are exposed on lower tides

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Cultural, Historical, and Archeological sites are known to exist in the area, however, the exact locations of these sites must be ascertained by contacting the Native American Heritage Commission at (916) 653-4082 and State Office of Historical Preservation (916) 445-7000, and/or Ms. Vicki Bates, Coordinator of the North Coast Information Center (707) 482-1822.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
O		BLM 24 hour dispatch	(707) 268-2000
T		Humboldt County Parks	(707) 445-7651
T		Bureau of Land Management	(707) 825-2300
T		U.S. Army Corp of Engineers, Eureka	(707) 443-0855
C	Briana Fraley	Table Bluff Reservation Wiyot Tribe	(707) 733-5055
T	Suzie Howser Dock Master	Humboldt Bay Harbor District	(707) 443-0801
O	Troy Nicolini	National Weather Service Woodley Island	(707) 442-2171

ADDITIONAL SITE SUMMARY COMMENTS:

For further information about coastal access in this area, please refer to the California Coastal Commission's California Coastal Access Guide. For photos of the coastline in this area, please refer to the California Coastal Records Project (www.californiacoastline.org).

1-305 -A Site Strategy - Humboldt Bay Inlet and Inner Samoa Peninsula

County and Thomas Guide Location

CA Road Atlas Humboldt

NOAA CHART

1-305 -A

Latitude N

Longitude W

40 45' 30 124 13' 45"

CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

Oil that is not captured here on out going tides will threaten offshore marine birds and many miles of shoreline. Avoid anchor impacts to eelgrass beds.

HAZARDS and RESTRICTIONS:

Swift currents in the channels and south towards the entrance of Humboldt bay can create hazards to navigation even when sea conditions are otherwise calm.

SITE STRATEGIES

The booming strategy will only be effective on ebb tide.

Strategy 1-305.1 Objective: Notify PG&E when oil threatens King Salmon

Call (707)444-0700 or 444-0712 (24hours)

Strategy 1-305.2 Objective: Collect oil at natural collection sites to minimize the spread of oil around the bay and to prevent oil from exiting the bay

Install deflection boom at USCG Cove, USCG boat station, Samoa boat launching ramp, and other sites where natural collection can be enhanced with strategic boom deployments.

Note: Skimming will need to begin as soon as that equipment can be brought to these collection points, but will not be critical until oil begins to collect in skimmable amounts at the various collection points. The installation of the deflection-to-collection booms should be the primary focus of the initial response efforts that are prescribed in this strategy.

Strategy 1-305.3 Objective: On water skimming of free floating oil

Use self propelled skimmers to begin on-water oil recovery in areas where oil is still concentrated.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	tvpe and gear	Boom boat	Skiffs punts	Skimmers No	Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
1-305.1	0	0	0	0	0		0	0	0		0		
1-305.2	2000	0	0	0	10	22 lb+ Danforth	2	0	1	SSS/SPS		8	
1-305.3	0	0	0	0	0		0	0	1	SPS		3	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Humboldt Bay is adjacent to Highway 101, near the cities of Arcata and Eureka. Highway 255 passes over it on the north end. This site is accessible by land by driving toward Samoa on Highway 255 and taking New Navy Base Road south to the County RV Camp site and boat launch ramp area. This response site extends from the cove directly north of the Samoa public launch ramp and campground south about one quarter mile including beaches inside of the USCG Station. The public campground and launching ramp facility should be utilized as the staging area of operations for response crews working at this site. The campground and boat launch are managed by Humboldt County Parks.

LAND ACCESS: Large trucks can access much of this area

WATER LOGISTICS: The water near shore is shallow, but otherwise navigable.

Limitations: depth, obstruction

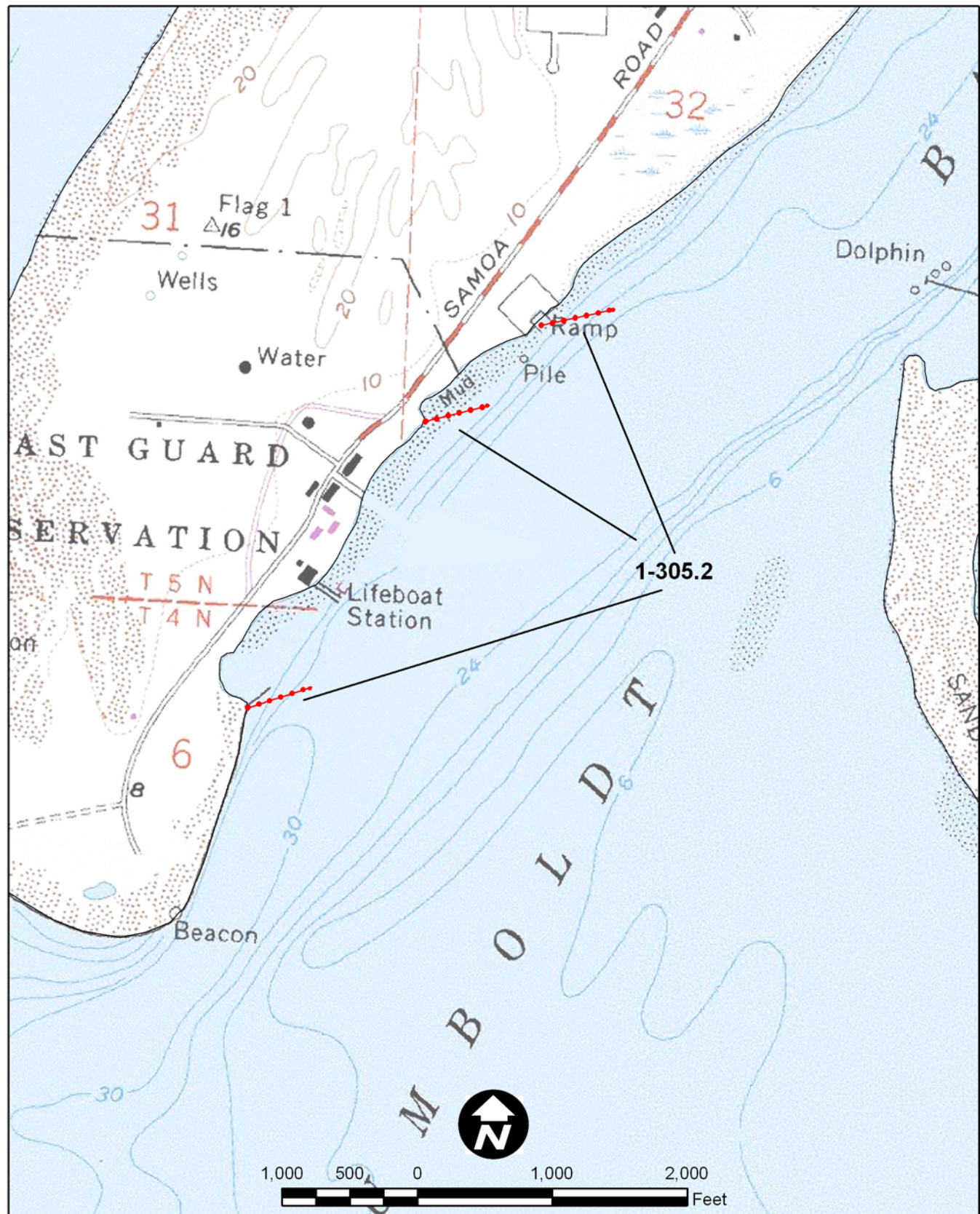
Launching, Loading, Docking and Services Available: Trailered boats can be launched directly at this site at the county boat ramp.

FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Historic large spill have utilized the Red Lion Inn for the Command Post, and local OSRO's have staging areas nearby

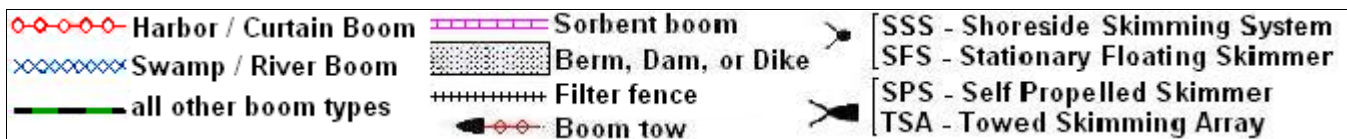
COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



CDFG-OSPR & USCG Site: 1-305 Name: Humboldt Bay Inlet & Inner Samoa Peninsula

Kris Wiese (OSPR) & Jo Sanders (OSPR) Date: July 17, 2008



County: **Humboldt**

USGS Quad:

Thomas Guide Location

CA Road Atlas

NOAA Chart:

Latitude N

40 50' N

Longitude W

124 07' 30"W

Last Page Update :

SITE DESCRIPTION:

The response site is largely in the Samoa Channel south of the HWY 255 bridge. The boom deployment is designed to stop the spread of oil into the shallow waters of Arcata Bay on the North side of HWY 255 on the flood tide. The strong tidal currents in the bay can bring oil from the mouth of the bay to the sensitive sites in North Bay in one or two tidal cycles.

SEASONAL and SPECIAL RESOURCE CONCERN

Extensive marsh complexes, wetlands, estuaries, bird habitats, aquaculture. High bird use area year round.

RESOURCES OF PRIMARY CONCERN

Humboldt Bay Hatchery, Pacific oyster (*Crassostrea gigas*). The north bay is home to a large and commercially successful oyster seed production and smaller grow out operation. Care should be taken to minimize impacts to these resources.

Waterfowl, shorebirds, gulls, pelicans, cormorants, wading birds, and raptors are all at least occasionally present, with seasonal variations in migratory species but with high numbers present in the area on any average day.

Brant

Harbor seals are the only marine mammals typically found at this site.

Anadromous salmonids:

Coho (FT, ST) and Chinook (FT) salmon, Steelhead (FT) and Coastal cutthroat (SSC) trouts:

- spawning runs (08-06)
- juveniles/smolts (02-08)

Green sturgeon (FT,SSC)

Pacific oyster (*Crassostrea gigas*) aquaculture

eelgrass beds

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Cultural, Historical, and Archeological sites are known to exist in the area, however, the exact locations of these sites must be ascertained by contacting the Native American Heritage Commission at (916) 653-4082 and State Office of Historical Preservation (916) 445-7000, and/or Ms. Vicki Bates, Coordinator of the North Coast Information Center (707) 482-1822.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
O		Humboldt County Sheriff	(707) 445-7251
C	Briana Fraley	Table Bluff Reservation Wiyot Tribe	(707) 733-5055
O	Suzie Howser Dock Master	Humboldt Bay Harbor District	(707) 443-0801
O	Troy Nicolini	National Weather Service Woodley Island	(707) 442-2171

ADDITIONAL SITE SUMMARY COMMENTS:

For further information about coastal access in this area, please refer to the California Coastal Commission's California Coastal Access Guide. For photos of the coastline in this area, please refer to the California Coastal Records Project (www.californiacoastline.org).

1-310 -A Site Strategy - North Humboldt Bay

County and Thomas Guide Location

CA Road Atlas Humboldt

NOAA CHART

1-310 -A

Latitude N

Longitude W

40 50' N 124 07' 30"

CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

This strategy should be implemented ASAP; oil will rapidly move towards Arcata Bay on a flood tide from most points in Humboldt Bay north of the jetty. Oiling of north bay could be difficult to clean up and cause long term damage to important habitats. Avoid anchor impacts to eelgrass beds.

HAZARDS and RESTRICTIONS:

Access to this site is best on the water, as the islands have restricted access and are off limits to response traffic. Most of the remaining shoreline consists of wide and often shallow mud flats that are soft, deep, and difficult to walk upon and unstable to work on.

SITE STRATEGIES

Swift currents in Samoa Channel will complicate conventional response. Boom with two tension cables is advised. Vessel traffic may complicate response.

Strategy 1-310.1 Objective: On water recovery

Use self propelled skimmers to begin oil recovery to minimize the area of injury in the bay.

Strategy 1-310.2 Objective: Prevent oil from entering Arcata Bay

Direct oil with deflection boom to a swift water skimmer near the middle of the channel just north of the HWY 255 Bridge. Two lengths of boom should extend from the skimmer to the south ends of the two main channel bridge support structures. From those points, the boom should extend south terminating at the permanent channel marking structures on the east and west sides of the Samoa Channel.

Additional boom that extends from the two channel marking structures and up above the high tide line should be installed as soon as possible.

Strategy 1-310.3 Objective: Deflection to collection/ THAT MAY BE DEPLOYED SOMETIME AFTER THE INITIAL RESPONSE STAGE HAS PASSED.

Use 400' sections of boom (or less) to deflect oil from the Samoa Channel to a floating skimmer at the Louisiana Pacific Lumber dock.

Strategy 1-310.4 Objective: Add a second layer of boom for back up behind the first layer used in strategy #2

By adding a second layer of boom behind the "V" and skimmer listed in Strategy #2, any oil that was missed by the first layer of boom will have a second chance of being stopped so that it will not spread further into Arcata Bay.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
1-310.1	0	0	0	0	0	0	0	1 SPS	1	3	
1-310.2		3500	0	0	5 22 lb+Danforth anchors	2	0	1 SPS	0	8	
1-310.3	2000		0	0	10 22+lbs Danforth anchors	1	0	1 SFS	0	4	
1-310.4	0	2500	0	0	5 22+lbs Danforth anchors	0	0	0	0	4	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Humboldt Bay is adjacent to Highway 101, near the cities of Arcata and Eureka. Highway 255 passes over it on the north end. The response area for this site include the Samoa Channel between the town of Samoa and Indian Island, under the Highway 255 bridge. The response site is largely in the Samoa Channel south of the HWY 255 bridge. The boom deployment is designed to stop the spread of oil into the shallow waters of Arcata Bay on the North side of HWY 255 on the flood tide.

LAND ACCESS:

WATER LOGISTICS:

Limitations: depth, obstruction

The channels are deep, while the shoreline is mudflats.

Launching, Loading, Docking and Services Available:

There are numerous public boat ramps around the bay, with the nearest being directly under the east end of the HWY 255 Bridge in Eureka.

FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Public docks and boat launching facilities are available around the bay, and the OSRO's have on the water response resources pre-staged in the area.

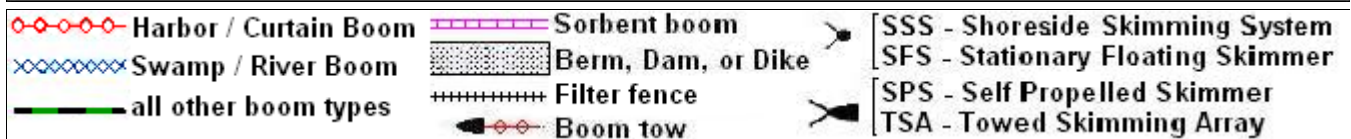
COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS: Bring a life vest and rain jacket, year round. Do not access Indian Island without permissi



CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
 Site: 1-310, 1-328, 1-330 Site Name: North Humboldt Bay

Jeff Dayton (OSPR) & Greg Ewing (OSPR)
 Date: May 18, 2011



County: **Humboldt**

USGS Quad:

Thomas Guide Location

CA Road Atlas

NOAA Chart:

Latitude N

Longitude W

40 53'15"N 124 06' 30"W

Last Page Update :

SITE DESCRIPTION:

Mad River Slough enters Arcata Bay at this site. Property ownership in the area includes Humboldt Bay National Wildlife Refuge and Department of Fish and Game. Extensive marsh complexes and estuary, mudflats

SEASONAL and SPECIAL RESOURCE CONCERN

High bird use area year round.

RESOURCES OF PRIMARY CONCERN

Extensive slough habitat beyond the highway 255 bridge should be excluded from oiling if possible.

Waterfowl, shorebirds, wading birds, raptors

Muskrat, beaver, and harbor seals have been reported here.

Tidewater Goby (FE,SSC), FWS Critical Habitat

Pacific oyster (*Crassostrea gigas*) aquaculture

eelgrass beds in slough

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Cultural, Historical, and Archeological sites are known to exist in the area, however, the exact locations of these sites must be ascertained by contacting the Native American Heritage Commission at (916) 653-4082 and State Office of Historical Preservation (916) 445-7000, and/or Ms. Vicki Bates, Coordinator of the North Coast Information Center (707) 482-1822.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
O		Humboldt County Sheriff	(707) 445-7251
T		CA Dept of Fish and Game Wildlife Area	(707) 445-6493
C	Briana Fraley	Table Bluff Reservation Wiyot Tribe	(707) 733-5055
T	Ken Griggs Deputy Refuge Manager	Humboldt Bay NWR Complex-24 hr cell #2	(707) 499-2397
O	Suzie Howser Dock Master	Humboldt Bay Harbor District	(707) 443-0801
T	Eric Nelson Refuge Manager	Humboldt Bay NWR Complex-24 hour cell	(707) 498-5406
T	Eric Nelson Refuge Manager	Humboldt Bay NWR Complex	(707) 733-5406
O	Troy Nicolini	National Weather Service Woodley Island	(707) 442-2171

ADDITIONAL SITE SUMMARY COMMENTS:

For further information about coastal access in this area, please refer to the California Coastal Commission's California Coastal Access Guide. For photos of the coastline in this area, please refer to the California Coastal Records Project (www.californiacoastline.org).

1-320 -A Site Strategy - Mad River Slough

County and Thomas Guide Location

CA Road Atlas Humboldt

NOAA CHART

1-320 -A

Latitude N

Longitude W

40 53'15 124 06' 30"

CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

Oiling of slough and marsh complex could cause long term damage to important habitats. Avoid anchoring in eelgrass beds.

HAZARDS and RESTRICTIONS:

Shallow water at low & high tides. Extensive mudflats. Swift currents.

SITE STRATEGIES

Shallow sloughs, extensive mudflats. Depth limitations may complicate vessel access.

Strategy 1-320.1 Objective: Exclusion booming to exclude the oil from the site.

Stretch a boom from one side of the channel to the other. Workers may have to walk upon the mudflats to complete this installation. Hip waders and extreme caution is advised when walking on mudflats.

Strategy 1-320.2 Objective: Collect oil when a significant quantity is present.

Collect oil from the waters surface by employing a skimmer.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	tvpe and gear	Boom boat	Skiffs punts	Skimmers No	Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
1-320.1	1200	100	0	1200	4	22lb+ Danforth	0	1	0			6	
1-320.2	0	0	0	0	0		0	0	1	SSS	0	2	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Mad River slough is accessible by land from Highway 255, or by shallow draft boat in the northern end of the Samoa channel of Humboldt Bay. Mad River Slough enters Arcata Bay at this site. Property ownership in the area includes Humboldt Bay National Wildlife Refuge and Department of Fish and Game.

LAND ACCESS: Vehicle access to site from Highway 255.

WATER LOGISTICS: shallow slough

Limitations: depth, obstruction

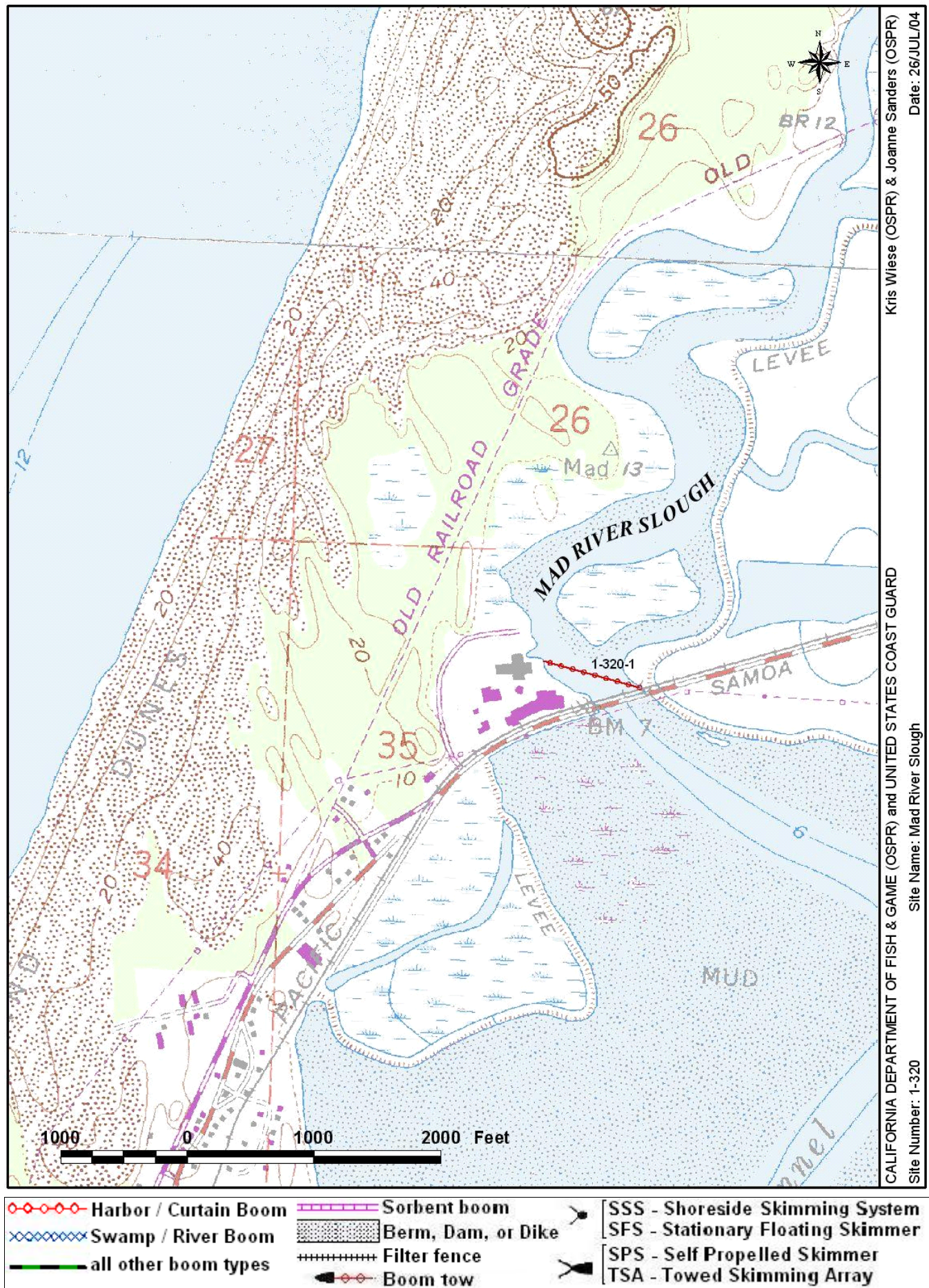
Launching, Loading, Docking small boat lauch at site
and Services Available:

FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

parking area adjacent to slough at Highway 255

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



County: **Humboldt**

USGS Quad:

Thomas Guide Location

CA Road Atlas

NOAA Chart:

Latitude N

40 41' 50"

Longitude W

124 13' 20"W

Last Page Update :

SITE DESCRIPTION:

This site includes the tidal estuaries of four small coastal streams that enter Arcata Bay. Ownership and management includes City of Arcata and Humboldt Bay National Wildlife Refuge. Site is shallow; and most of it will be exposed mudflats at lower tides. Strong tidal movements will make spill control very challenging in this habitat.

SEASONAL and SPECIAL RESOURCE CONCERN

High bird use area year round.

RESOURCES OF PRIMARY CONCERN

Extensive eel grass beds are the subject of much public interest and concern. Brant use these areas for foraging in winter.

Waterfowl, shorebirds, wading birds, raptors

Brant

harbor seals

Anadromous salmonids:

Coho (FT,ST) and Chinook (FT) salmon, Steelhead (FT) and Coastal cutthroat (SSC) trouts:

- spawning runs (08-06)

- juveniles/smolts (02-08)

Tidewater goby (FE,SSC), FWS Critical Habitat

Pacific lamprey

eelgrass

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Cultural, Historical, and Archeological sites are known to exist in the area, however, the exact locations of these sites must be ascertained by contacting the Native American Heritage Commission at (916) 653-4082 and State Office of Historical Preservation (916) 445-7000, and/or Ms. Vicki Bates, Coordinator of the North Coast Information Center (707) 482-1822.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
T		City of Arcata	(707) 822-5951
C	Briana Fraley	Table Bluff Reservation Wiyot Tribe	(707) 733-5055
T	Ken Griggs Deputy Refuge Manager	Humboldt Bay NWR Complex-24 hr cell #2	(707) 499-2397
O	Suzie Howser Dock Master	Humboldt Bay Harbor District	(707) 443-0801
T	Eric Nelson Refuge Manager	Humboldt Bay NWR Complex-24 hour cell	(707) 498-5406
T	Eric Nelson Refuge Manager	Humboldt Bay NWR Complex	(707) 733-5406
O	Troy Nicolini	National Weather Service Woodley Island	(707) 442-2171

ADDITIONAL SITE SUMMARY COMMENTS:

For further information about coastal access in this area, please refer to the California Coastal Commission's California Coastal Access Guide. For photos of the coastline in this area, please refer to the California Coastal Records Project (www.californiacoastline.org).

1-324 -A Site Strategy - Arcata Bay Sloughs

County and Thomas Guide Location

CA Road Atlas Humboldt

NOAA CHART

1-324 -A

Latitude N

Longitude W

40 41' 50 124 13' 20"

CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

Oiling of slough and marsh complex could cause long term damage to important habitats. Avoid anchoring in eelgrass beds.

HAZARDS and RESTRICTIONS:

Much of the bay is shallow with abraded channels at low tide. Extensive oyster culture near the Samoa Channel should be avoided by boat traffic.

SITE STRATEGIES

Shallow sloughs, extensive mudflats. Depth limitations may complicate vessel access.

Strategy 1-324.1 Objective: Exclude oil from entering surrounding sloughs, especially Jacoby Creek

Exclusion boom the mouth of the creek.

Strategy 1-324.2 Objective: Exclude oil from entering surrounding sloughs, especially Gannon Slough

Exclusion boom the mouth of the slough.

Strategy 1-324.3 Objective: Exclude oil from entering surrounding sloughs, especially Butcher slough.

Exclusion boom the mouth of the slough.

Strategy 1-324.4 Objective: Exclude oil from entering surrounding sloughs, especially McDaniels slough.

Exclusion boom the mouth of the slough.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	type and gear	Boom boat	Skiffs punts	Skimmers No	Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
1-324.1	500	100	0	100	0		0	0	0		Stakes, shovels, hammers	6	
1-324.2	500	100	0	100	0		0	0	0		Stakes, shovels, hammers	6	
1-324.3	300	50	0	100	0		0	0	0		Stakes, shovels, hammers	6	
1-324.4	150	50	0	50	0		0	0	0		Stakes, shovels, hammers	6	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Arcata bay is at the northern end of Humboldt Bay, and adjacent to Highway 101, near the cities of Arcata and Eureka. Highway 255 passes over it on the south end of Arcata bay. Jacoby Creek and Gannon sloughs can be accessed from Highway 101 between Bayside Cutoff and South G Streets. Butcher Slough and McDaniels sloughs can be accessed from the Arcata Marsh at the south end of I Street in Arcata. Butcher Slough can also be accessed from South G Street. This site includes the tidal estuaries of four small coastal streams that enter Arcata Bay. Ownership and management includes City of Arcata and Humboldt Bay National Wildlife Refuge.

LAND ACCESS: Vehicles can drive near sloughs, foot or shallow draft vessels req'd

WATER LOGISTICS: shallow mudflats

Limitations: depth, obstruction

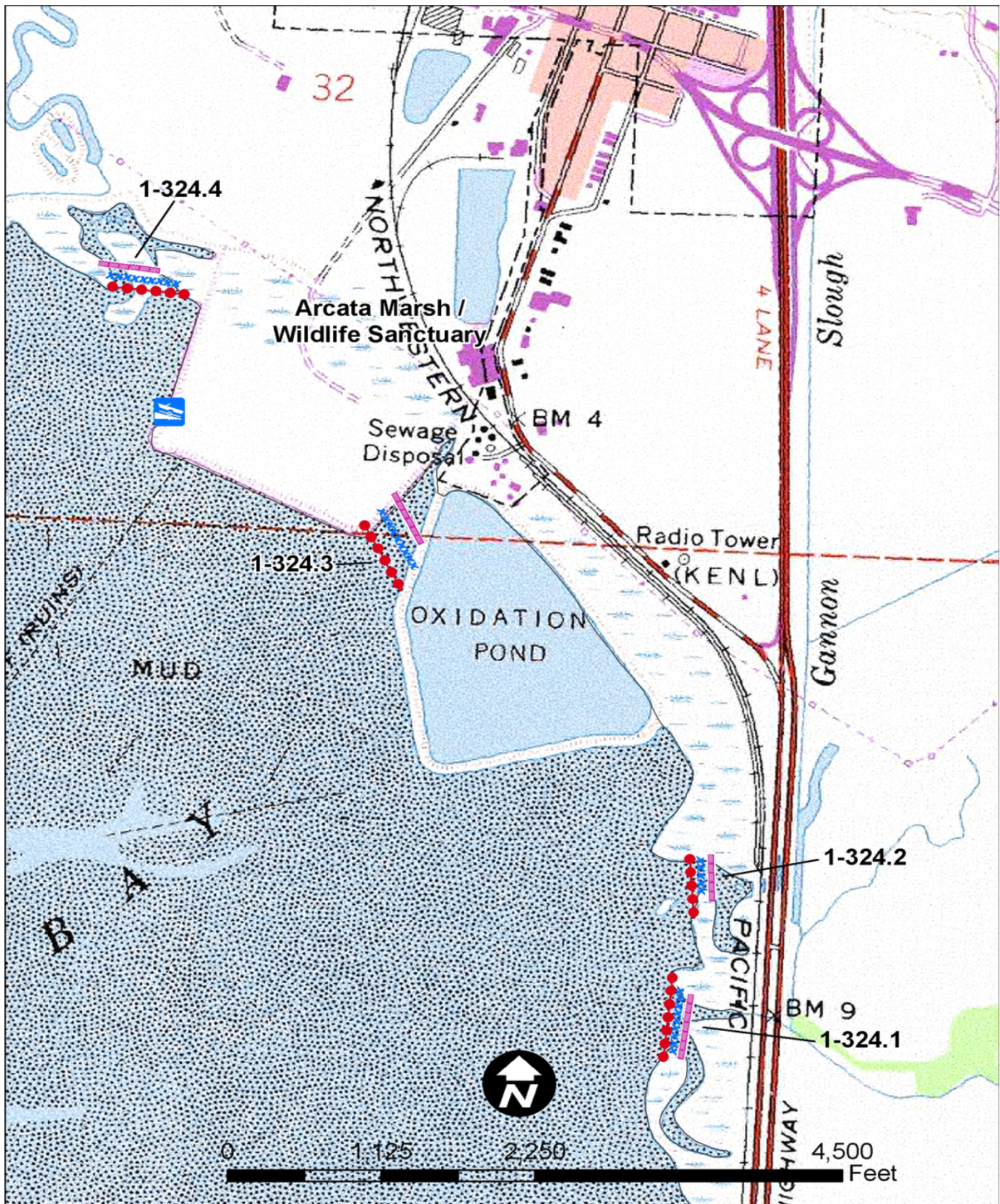
Launching, Loading, Docking small launch at Arcata Marsh
and Services Available:

FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Parking areas at Arcata Marsh may be appropriate.

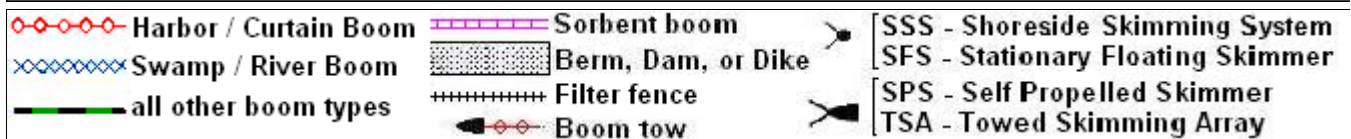
COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
 Site: 1-324 Site Name: Arcata Bay

Jeff Dayton (OSPR) & Greg Ewing (OSPR)
 Date: May 18, 2011



County: **Humboldt**

USGS Quad:

Thomas Guide Location

CA Road Atlas

NOAA Chart:

Latitude N

40 48' 20"

Longitude W

124 08'25"W

Last Page Update :

SITE DESCRIPTION:

The response site is northwest of the Hwy 101 bridge and extends to the mouth of the slough which is directly east of Daby Island. The slough extends a large distance east of the 101 HWY bridge. Any response should try and exclude oil from moving with the tides beyond the HWY 101 bridge. Land ownership and management includes Humboldt Bay National Wildlife Refuge, Department of Fish and Game, and City of Eureka. Eureka slough is a large tidal slough on the northern end of the city of Eureka. The water is shallow in much of the slough and large percentages of the total volume are exchanged on average tide cycles.

SEASONAL and SPECIAL RESOURCE CONCERN

High bird use area year round.

RESOURCES OF PRIMARY CONCERN

Extensive marsh habitat east of the HWY 101 bridge and just upstream of the mouth of the slough makes this site a prime target for exclusion booming.

Numerous shorebirds and waterfowl can be present at various times of the year.

harbor seals, river otters

Anadromous salmonids:

Coho (FT,ST) and Chinook (FT) salmon, Steelhead (FT) and Coastal cutthroat (SSC) trouts:

- spawning runs (08-06)

- juveniles/smolts (02-08)

Tidewater goby (FE,SSC), FWS Critical Habitat

Longfin smelt (ST)

Pacific lamprey

eelgrass beds

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Cultural, Historical, and Archeological sites are known to exist in the area, however, the exact locations of these sites must be ascertained by contacting the Native American Heritage Commission at (916) 653-4082 and State Office of Historical Preservation (916) 445-7000, and/or Ms. Vicki Bates, Coordinator of the North Coast Information Center (707) 482-1822.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
E		Target Store	(707) 442-0201
T		CA Dept of Fish and Game Wildlife Area	(707) 445-6493
E		Eureka Police Department	(707) 441-4044
E		City of Eureka	(707) 441-4203
C	Briana Fraley	Table Bluff Reservation Wiyot Tribe	(707) 733-5055
T	Ken Griggs Deputy Refuge Manager	Humboldt Bay NWR Complex-24 hr cell #2	(707) 499-2397
O	Suzie Howser Dock Master	Humboldt Bay Harbor District	(707) 443-0801
T	Eric Nelson Refuge Manager	Humboldt Bay NWR Complex-24 hour cell	(707) 498-5406
T	Eric Nelson Refuge Manager	Humboldt Bay NWR Complex	(707) 733-5406
O	Troy Nicolini	National Weather Service Woodley Island	(707) 442-2171

ADDITIONAL SITE SUMMARY COMMENTS:

For further information about coastal access in this area, please refer to the California Coastal Commission's California Coastal Access Guide. For photos of the coastline in this area, please refer to the California Coastal Records Project (www.californiacoastline.org).

1-326 -A Site Strategy - Eureka Slough

County and Thomas Guide Location

CA Road Atlas Humboldt

NOAA CHART

1-326 -A

Latitude N Longitude W

40 48' 20 124 08'25"

CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

Oiling of slough and marsh complex could cause long term damage to important habitats. Avoid anchoring in eelgrass beds.

HAZARDS and RESTRICTIONS:

Shallow water at low tide, swift currents, extensive mudflats

SITE STRATEGIES

Shallow sloughs, extensive mudflats. Depth limitations may complicate vessel access.

Strategy 1-326.1 Objective: Exclude oil from the slough.

Proposed amendment 5/31/2007

Exclusion boom the mouth of the slough. The boom can be deployed either to exclude oil from entering or in a manner that diverts oil to the shore behind the Target store where it can be collected with a skimmer. The response area behind the Target store is accessible and large enough to allow vacuum trucks to work there. Extensive tidal flats at lower tides will make boom deployment difficult at this site.

This update changes only the descriptive response language, and possible deployment tactics. It does not change the amount of equipment needed to respond at this site.

Strategy 1-326.2 Objective: Collect oil

Proposed amendment 5/31/2007 (Equipment neutral)

Collect oil using a skimmer. The oil should be diverted from out of the channel and to the small skiff launch ramp behind the Target Store. This site is accessible with a vacuum truck, if needed.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
1-326.1	1000	200	0	100	0	1	0			10	
1-326.2		1000	0	100	0	1	0	1 sss	1 collection and containment package	10	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Eureka slough is just around the corner from the City of Eureka launch ramp on waterfront drive. A small skiff launch ramp behind the Target store near the 101 HWY bridge could be used for site access and boom deployments. The response site is northwest of the Hwy 101 bridge and extends to the mouth of the slough which is directly east of Daby Island. The slough extends a large distance east of the 101 HWY bridge. Any response should try and exclude oil from moving with the tides beyond the HWY 101 bridge. Land ownership and management includes Humboldt Bay National Wildlife Refuge, Department of Fish and Game, and City of Eureka.

LAND ACCESS: Easy drive up access behind the Target store for large trucks.

WATER LOGISTICS:

Limitations: depth, obstruction

Water depths are shallow over most of this response area.

Launching, Loading, Docking and Services Available:

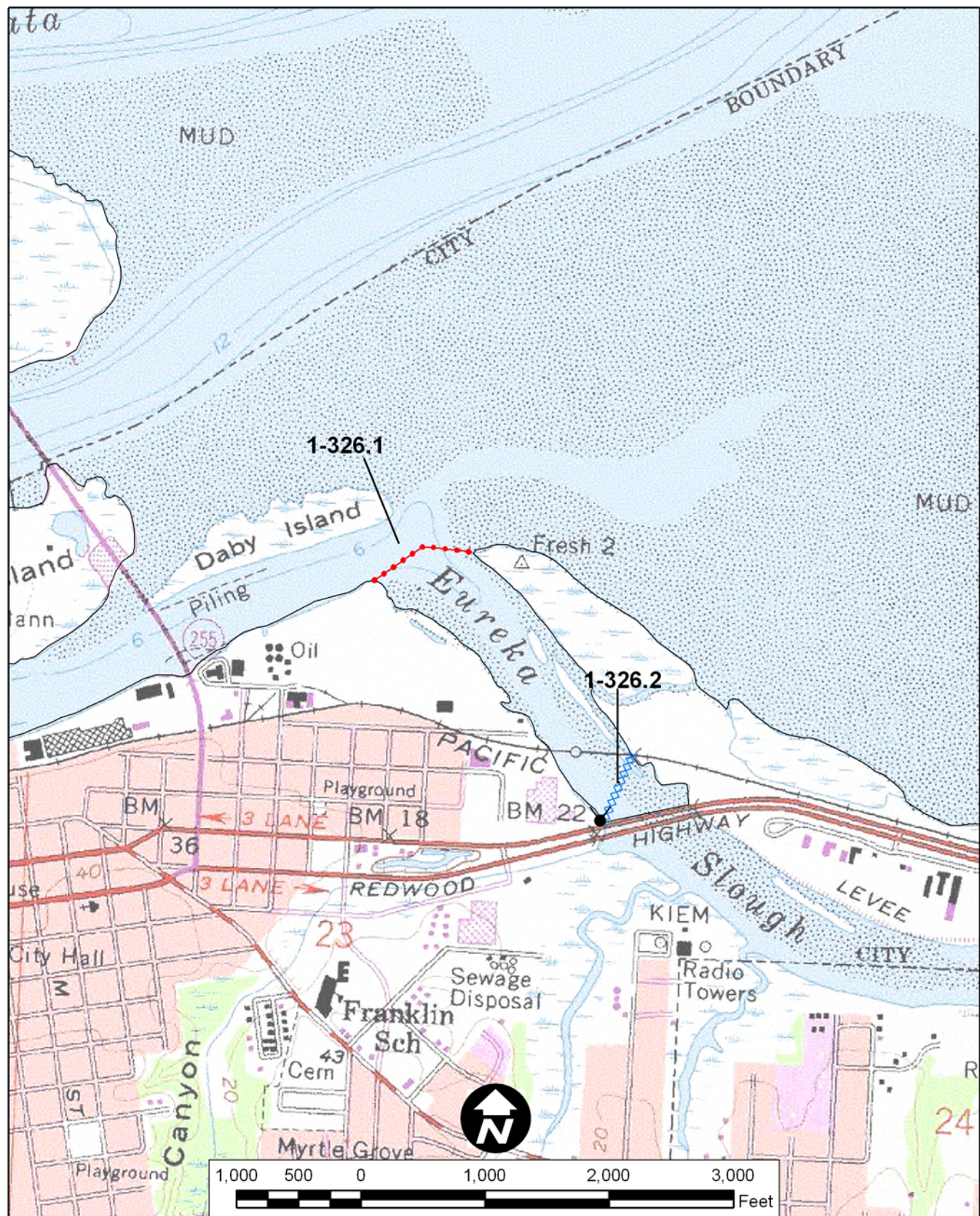
Boat launching for eastern response efforts can be made at the foot of the 255 HWY bridge. Skiffs can be launched at the ramp behind the Target store.

FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

The Target parking lot behind the store is large enough for staging local response equipment only.

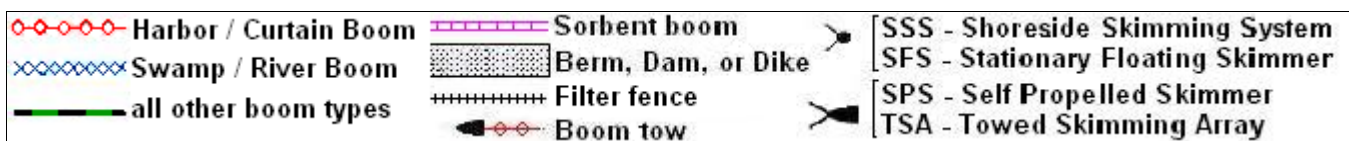
COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS: Contact the Target store manager when using this site for response purposes.



CDFG-OSPR & USCG Site: 1-326 Name: Eureka Slough

Kris Wiese (OSPR) & Jo Sanders (OSPR) Date: July 17, 2008



County: **Humboldt**

USGS Quad:

Thomas Guide Location

CA Road Atlas

NOAA Chart:

Latitude N

40 48' 35"

Longitude W

124 09' 35"W

Last Page Update :

SITE DESCRIPTION:

This response site is designed to stop oil on an incoming tide from moving further up the Eureka channel towards Arcata Bay on a flood tide. It may also be appropriate on the ebb tide to strand floating oil as it comes back down either channel from Arcata Bay. The response area is the two bifurcating channels at the south west tip of Woodley Island. Oil should be stranded on shore as near to this the tip of Island as is feasible under prevailing response conditions. Woodley Island is managed by the Humboldt Bay Harbor, Recreation, and Conservation District. The stranding site is directly in front and around the statue of the mariner at the south western tip of the Island. Oil from the middle channel should be diverted to the west side of the island into the natural collection cove there.

SEASONAL and SPECIAL RESOURCE CONCERN

High bird use area year round.

RESOURCES OF PRIMARY CONCERN

An extensive public boat dock and salt marsh complex are present at Woodley Island. Extensive marsh complexes exist in Arcata Bay and will be better protected by intercepting oil here.

Waterfowl, shorebirds, wading birds, waterbirds

harbor seals

Green sturgeon (FT,SSC)

eelgrass beds

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Cultural, Historical, and Archeological sites are known to exist in the area, however, the exact locations of these sites must be ascertained by contacting the Native American Heritage Commission at (916) 653-4082 and State Office of Historical Preservation (916) 445-7000, and/or Ms. Vicki Bates, Coordinator of the North Coast Information Center (707) 482-1822.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
E		City of Eureka	(707) 441-4203
C	Briana Fraley	Table Bluff Reservation Wiyot Tribe	(707) 733-5055
T	Suzie Howser Dock Master	Humboldt Bay Harbor District	(707) 443-0801
O	Troy Nicolini	National Weather Service Woodley Island	(707) 442-2171
T	Jeff Raimey	City of Eureka Public Marina 24-hour Cell	(707) 499-9755

ADDITIONAL SITE SUMMARY COMMENTS:

For further information about coastal access in this area, please refer to the California Coastal Commission's California Coastal Access Guide. For photos of the coastline in this area, please refer to the California Coastal Records Project (www.californiacoastline.org).

1-328 -A Site Strategy - Woodley Island

County and Thomas Guide Location

CA Road Atlas Humboldt

NOAA CHART

1-328 -A

Latitude N Longitude W

40 48' 35 124 09' 35"

CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

Oiling of marsh complex could cause long term damage to important habitats. Avoid anchoring in eelgrass beds.

HAZARDS and RESTRICTIONS:

The south west tip of Woodley Island near the Mariners statue is very shallow at high tide and exposed at moderate and lower tides.

SITE STRATEGIES

Swift currents, extensive mudflats. Vessel traffic may complicate response in channel.

Strategy 1-328.1 Objective: Boom, collect and skim oil out of the environment.

Diversion boom oil from out of the Eureka Channel to a skimmer at Woodley Island.

Strategy 1-328.2 Objective: Boom, collect and skim oil out of the environment

Place a boom from the southeastern shore of Indian Island to a skimmer on Woodley Island.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
1-328.1	1200	0	0	0	4 22 lb+ Danforth anchors	1		1 SPS	0 Stakes, shovels, hammer	3	
1-328.2	1200	0	0	0	4 22 lb+ Danforth anchors	1		1 SPS		5	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Humboldt Bay is adjacent to Highway 101, near the cities of Arcata and Eureka. Highway 255 passes over it on the north end, and the exit to Woodley Island is off of Highway 255 about 1/2 mile northeast of Eureka from Highway 101. This response site is designed to stop oil on an incoming tide from moving further up the Eureka channel towards Arcata Bay on a flood tide. It may also be appropriate on the ebb tide to strand floating oil as it comes back down either channel from Arcata Bay. The response area is the two bifurcating channels at the south west tip of Woodley Island. Oil should be stranded on shore as near to this the tip of Island as is feasible under prevailing response conditions. Woodley Island is managed by the Humboldt Bay Harbor, Recreation, and Conservation District.

LAND ACCESS: Vehicle access to Eureka waterfront and Woodley Island.

WATER LOGISTICS: shallow mudflats outside of channels

Limitations: depth, obstruction

Launching, Loading, Docking Eureka boat launch below Highway 255 bridge
and Services Available:

FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Eureka Boat Launch parking lot or Woodley Island parking lot may be suitable for local staging.

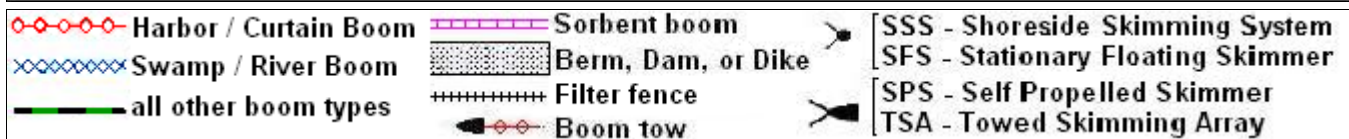
COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS: This site should be a priority for implementation with a strong westerly wind.



CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
 Site: 1-310, 1-328, 1-330 Site Name: North Humboldt Bay

Jeff Dayton (OSPR) & Greg Ewing (OSPR)
 Date: May 18, 2011



County: **Humboldt**

USGS Quad:

Thomas Guide Location

CA Road Atlas

NOAA Chart:

Latitude N

40 48' 55"

Longitude W

124 10' 05"W

Last Page Update :

SITE DESCRIPTION:

Indian Island is adjacent to Woodley Island in North Humboldt Bay. Ownership and management includes the Wiyot Tribe and City of Eureka. Indian Island is a low elevation island that has large wetlands that can be submerged at higher tides. The protection strategies are designed to exclude oil from the interior wet lands by diversion and exclusionary booming. Largest Island in Humboldt Bay, it is a sacred site for many of the tribes of northern California. Strong tidal currents in the Samoa channel transport most of the water in and out of Arcata Bay.

SEASONAL and SPECIAL RESOURCE CONCERN

This is a popular habitat for lots of wildlife year round. Excluding oil from this site is of primary concern in Humboldt Bay. The site has significant historical and cultural value that must also be protected.

RESOURCES OF PRIMARY CONCERN

Extensive marsh system and wetlands are vulnerable to oiling. The entire island is a cultural resource for the tribes and the City of Eureka.

Waterfowl, shorebirds, wading birds, waterbirds

harbor seals

Green sturgeon (FT,SSC)

Pacific Oyster aquaculture in area

eelgrass beds

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Cultural, Historical, and Archeological sites are known to exist in the area, however, the exact locations of these sites must be ascertained by contacting the Native American Heritage Commission at (916) 653-4082 and State Office of Historical Preservation (916) 445-7000, and/or Ms. Vicki Bates, Coordinator of the North Coast Information Center (707) 482-1822.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
E		City of Eureka	(707) 441-4203
C	Briana Fraley	Table Bluff Reservation Wiyot Tribe	(707) 733-5055
T	Suzie Howser Dock Master	Humboldt Bay Harbor District	(707) 443-0801
O	Troy Nicolini	National Weather Service Woodley Island	(707) 442-2171
T	Jeff Raimsey	City of Eureka Public Marina 24-hour Cell	(707) 499-9755

ADDITIONAL SITE SUMMARY COMMENTS:

For further information about coastal access in this area, please refer to the California Coastal Commission's California Coastal Access Guide. For photos of the coastline in this area, please refer to the California Coastal Records Project (www.californiacoastline.org).

1-330 -A Site Strategy - Indian Island

County and Thomas Guide Location

CA Road Atlas Humboldt

NOAA CHART

1-330 -A

Latitude N Longitude W

40 48' 55 124 10' 05"

CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

Oiling of sloughs and marsh complex could cause long term damage to important habitats. Avoid anchoring in eelgrass beds.

HAZARDS and RESTRICTIONS:

Sacred site. Do not enter without permission and supervision of the Wiyot Tribe.
Shallow water at low tide, swift currents, extensive mudflats.

SITE STRATEGIES

Shallow sloughs, extensive mudflats. Depth limitations may complicate vessel access.

Strategy 1-330.1 Objective: Stop oil from entering the islands wetlands after a skimmer and boom have been placed in the North Bay.

Add a short leg of boom from the west shore (Anchor point) of the island and connect it to the east end of the "V" boom array that is deployed as part of the North Humboldt Bay site 1-310.2 protection strategy. That terminal end is attached to an existing pile structure on the edge of the Samoa Channel.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no ttype and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
1-330.1		500	0	0	0	1	0	0	0	2	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Indian island is only accessible by boat. Do not walk on the Island. Indian Island is adjacent to Woodley Island in North Humboldt Bay. Ownership and management includes the Wiyot Tribe and City of Eureka. Indian Island is a low elevation island that has large wetlands that can be submerged at higher tides. The protection strategies are designed to exclude oil from the interior wet lands by diversion and exclusionary booming.

LAND ACCESS: No land access

WATER LOGISTICS: The island is accessible by boat, and depth is variable.

Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: There are docks on the east side, but permission to access the island should be obtained before landing there.

FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

This is not a location for a staging area or a field post.

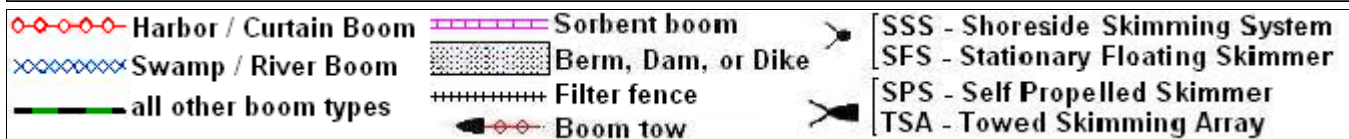
COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
 Site: 1-310, 1-328, 1-330 Site Name: North Humboldt Bay

Jeff Dayton (OSPR) & Greg Ewing (OSPR)
 Date: May 18, 2011



County: **Humboldt**
 USGS Quad: **Eureka**

Thomas Guide Location
 CA Road Atlas
 NOAA Chart: **18622**

Latitude N
 40 47'
 Longitude W
 124 11'

Last Page Update : 7/1/1996

SITE DESCRIPTION:

The Palco Marsh is a wetland mitigation project behind and adjacent to the Bayshore Mall. The City of Eureka is the land owner and manager. Saltwater marsh that is hydrokinetically connected to Humboldt Bay by three 30" culverts. Adjoining the marsh and located on the bay are eelgrass beds and exposed tidal flats.

SEASONAL and SPECIAL RESOURCE CONCERN

The marsh provides important coastal wetland habitat for wildlife in Eureka and adjacent to Humboldt Bay.

RESOURCES OF PRIMARY CONCERN

Palco Marsh has wetlands and salt marsh habitat with some tidal influence. The flows into the marsh are muted by obstructions in the connecting culvert system.

Wading birds, shorebirds, waterfowl (01-12)

harbor seals in bay

Pacific herring spawn on eelgrass in bay (11-03)

eelgrass beds

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Cultural, Historical, and Archeological sites are known to exist in the area, however, the exact locations of these sites must be ascertained by contacting the Native American Heritage Commission at (916) 653-4082 and State Office of Historical Preservation (916) 445-7000, and/or Ms. Vicki Bates, Coordinator of the North Coast Information Center (707) 482-1822.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
O		Eureka Police Department	(707) 441-4044
E		City of Eureka	(707) 441-4203
C	Briana Fraley	Table Bluff Reservation Wiyot Tribe	(707) 733-5055
O	Suzie Howser Dock Master	Humboldt Bay Harbor District	(707) 443-0801
O	Troy Nicolini	National Weather Service Woodley Island	(707) 442-2171
O	Scott Parsons Terminal Manager	Chevron Marine Terminal	(707) 444-7850

ADDITIONAL SITE SUMMARY COMMENTS:

For further information about coastal access in this area, please refer to the California Coastal Commission's California Coastal Access Guide. For photos of the coastline in this area, please refer to the California Coastal Records Project (www.californiacoastline.org).

1-340 -A Site Strategy - Palco Marsh

County and Thomas Guide Location

CA Road Atlas Humboldt

NOAA CHART

18622

1-340 -A

Latitude N

40 47'

Longitude W

124 11'

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Oiling of sloughs and marsh complex could cause long term damage to important habitats.

HAZARDS and RESTRICTIONS:

Be aware of numerous homeless encampments in the marsh.

SITE STRATEGIES

Contact City of Eureka for access if a response here is necessary.

Strategy 1-340.1 Objective: Prevent oil from entering the marsh.

Install pre-fitted splash boards into the water gate to prevent tidal exchanges.

Strategy 1-340.2 Objective: Prevent oil from entering the marsh

Ensure the Del Norte Street tidal gates are free from debris. Clear obstructions from the tidal gates to ensure they will close properly.

Strategy 1-340.3 Objective: Prevent oil from flowing into the marsh for Humboldt Bay

Install protective sorbents barriers at the faces of the splash boards to keep oil from passing into the culverts and into the marsh.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	type and gear	Boom boat	Skiffs punts	Skimmers No	Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
1-340.1	0	0	0	0	0		0	0	0	7	Pre-fitted splash boards	2	
1-340.2	0	0	0	0	0		0	0	0	1	Debris hooks, shovels, pry-bar, pitchfork	2	
1-340.3	0	0	0	10	0		0	0	0	0		2	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

From U.S. hwy 101 southbound in Eureka (South Broadway St), take Del Norte St. (M.P. 77.250) west and continue to the foot of Del Norte Street. Gated access located at the point where the railroad tracks cross Del Norte Street (the marsh is visible at this point).

Gated access is also possible from the foot of Vigo Street or Bayshore Way (SB U.S. hwy 101 M.P.s 76.750 and 76.560). The Palco Marsh is a wetland mitigation project behind and adjacent to the Bayshore Mall. The City of Eureka is the land owner and manager.

LAND ACCESS: Locked gates can be opened by the City of Eureka or EFD.

WATER LOGISTICS: No access by water. Too shallow

Limitations: depth, obstruction

Launching, Loading, Docking

and Services Available:

FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

OSRO's have staging at their facilities around Humboldt Bay.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



1-345 -A Site Summary- Elk River & Marsh**1-345 -A**

County: **Humboldt**
USGS Quad: **Eureka**

Thomas Guide Location
CA Road Atlas
NOAA Chart: **18622**

Latitude N
40 46'
Longitude W
124 12'

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site extends from the mouth of the Elk River on Humboldt Bay and includes the tidal marsh complex upstream. This site is within the City of Eureka and is also known as the Elk River Wildlife Sanctuary managed by the city. Tidal influence extends well upstream of the Highway 101 bridge. The inlet consists of sheltered tidal flats with eelgrass beds. Elk River spit is fine to medium grain sand.

SEASONAL and SPECIAL RESOURCE CONCERN

This is a high bird use area year round.

RESOURCES OF PRIMARY CONCERN

The Elk river estuary has extensive wetlands and saltmarsh that would be difficult to clean-up if oil enters that environment.

Wading birds, shorebirds, waterfowl (01-12), migratory waterfowl and shorebirds (10-04); Brant (10-06), Kingfishers, Egrets, raptors incl. Osprey (01-12).

harbor seals, river otters

Anadromous salmonids: Coho (FT,ST) and Chinook (FT) salmon, Steelhead (FT) and Coastal cutthroat (SSC) trouts:

- spawning runs (08-06)
- juveniles/smolt (02-08)

Longfin smelt (ST)

Tidewater goby (FE,SSC), FWS Critical Habitat

Pacific lamprey

Pacific herring spawn on eelgrass (11-03).

Larval and juvenile flatfishes and herring utilize this area.

Other non-com'l fish spp. utilize the eelgrass beds (habitat).

eelgrass beds

beach layia (FE,SE), Humboldt Bay wallflower (FE,SE)

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Cultural, Historical, and Archeological sites are known to exist in the area, however, the exact locations of these sites must be ascertained by contacting the Native American Heritage Commission at (916) 653-4082 and State Office of Historical Preservation (916) 445-7000, and/or Ms. Vicki Bates, Coordinator of the North Coast Information Center (707) 482-1822.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
T		CA Dept of Fish and Game Wildlife Area	(707) 445-6493
O		Eureka Police Department	(707) 441-4044
T		City of Eureka	(707) 441-4203
C	Briana Fraley	Table Bluff Reservation Wiyot Tribe	(707) 733-5055
O	Suzie Howser Dock Master	Humboldt Bay Harbor District	(707) 443-0801
O	Troy Nicolini	National Weather Service Woodley Island	(707) 442-2171
O	Scott Parsons Terminal Manager	Chevron Marine Terminal	(707) 444-7850

ADDITIONAL SITE SUMMARY COMMENTS:

For further information about coastal access in this area, please refer to the California Coastal Commission's California Coastal Access Guide. For photos of the coastline in this area, please refer to the California Coastal Records Project (www.californiacoastline.org).

1-345 -A Site Strategy - Elk River & Marsh

County and Thomas Guide Location

CA Road Atlas Humboldt

NOAA CHART

18622

1-345 -A

Latitude N

40 46'

Longitude W

124 12'

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Oiling of sloughs and marsh complex could cause long term damage to important habitats. Avoid anchoring in eelgrass beds.

HAZARDS and RESTRICTIONS:

There is extensive shoaling in this area, and a significant number of potentially submerged pilings from an old pipeline trestle in the mouth of the river.

SITE STRATEGIES

Shallow sloughs, extensive mudflats. Depth limitations may complicate vessel access.

Strategy 1-345.1 Objective: Shut key-locked drop gates to prevent tidal exchange into the marsh

Keys are available at either the Chevron Terminal in Eureka or from the City of Eureka Public Works Office.

Strategy 1-345.2 Objective: Boom the mouth of Elk River to exclude oil.

Exclusion boom the river mouth and collect oil if possible.

Strategy 1-345.3 Objective: Collect oil when enough is present to skim.

Use a skimmer to collect oil from off the water into collection.

Strategy 1-345.4 Objective: Deflect oil from the mouth of the river north into the quiet water on the eastern shore of the bay.

Deflection booming: Install a chevron extending from the northern tip of the sand spit and out (N.W. direction) to the old piles in front of the river mouth. From that point, deploy the boom (E.) into the quiet water on the eastern shore of Humboldt Bay and north of the river mouth. Deployed in 2008, the strategy was modified with the addition of 1000' of boom in order to reach completely across the channel at high tide.

This would be an alternative response to Strategy #2 at this site, and is intended to replace that strategy as the primary deployment to be employed at this site. The original strategy will remain as an alternative that could be used when or if this strategy is not feasible, or as a second layer of protection.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	tvpe and gear	Boom boat	Skiffs punts	Skimmers No	Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
1-345.1	0	0	0	0	0		0	0	0	1	Key	2	
1-345.2	1400	0	0	300	5	22 lb+ Danforth anchors	0	1				4	
1-345.3	0	0	0	0	0		0	0	1	SSS/SPS	0	2	
1-345.4		2400	0	0	8	22 lb+ Danforth anchors		1	0	0		4	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

From southbound U.S. hwy 101 (South Broadway Street) in Eureka, turn right at the "Coastal Access" sign at Hilfiker Lane (M.P. 75.740) and continue to the end of the street. Park on the street or in the parking lot on the banks of the Elk River. There is also access to the river mouth from the end of Truesdale Street, just south of the Bayshore Mall. This site extends from the mouth of the Elk River on Humboldt Bay and includes the tidal marsh complex upstream. This site is within the City of Eureka and is also known as the Elk River Wildlife Sanctuary managed by the city. Tidal influence extends well upstream of the Highway 101 bridge.

LAND ACCESS: accessible to all vehicle types including heavy equipment

WATER LOGISTICS: The water depth is variable, probably submerged pilings.

Limitations: depth, obstruction

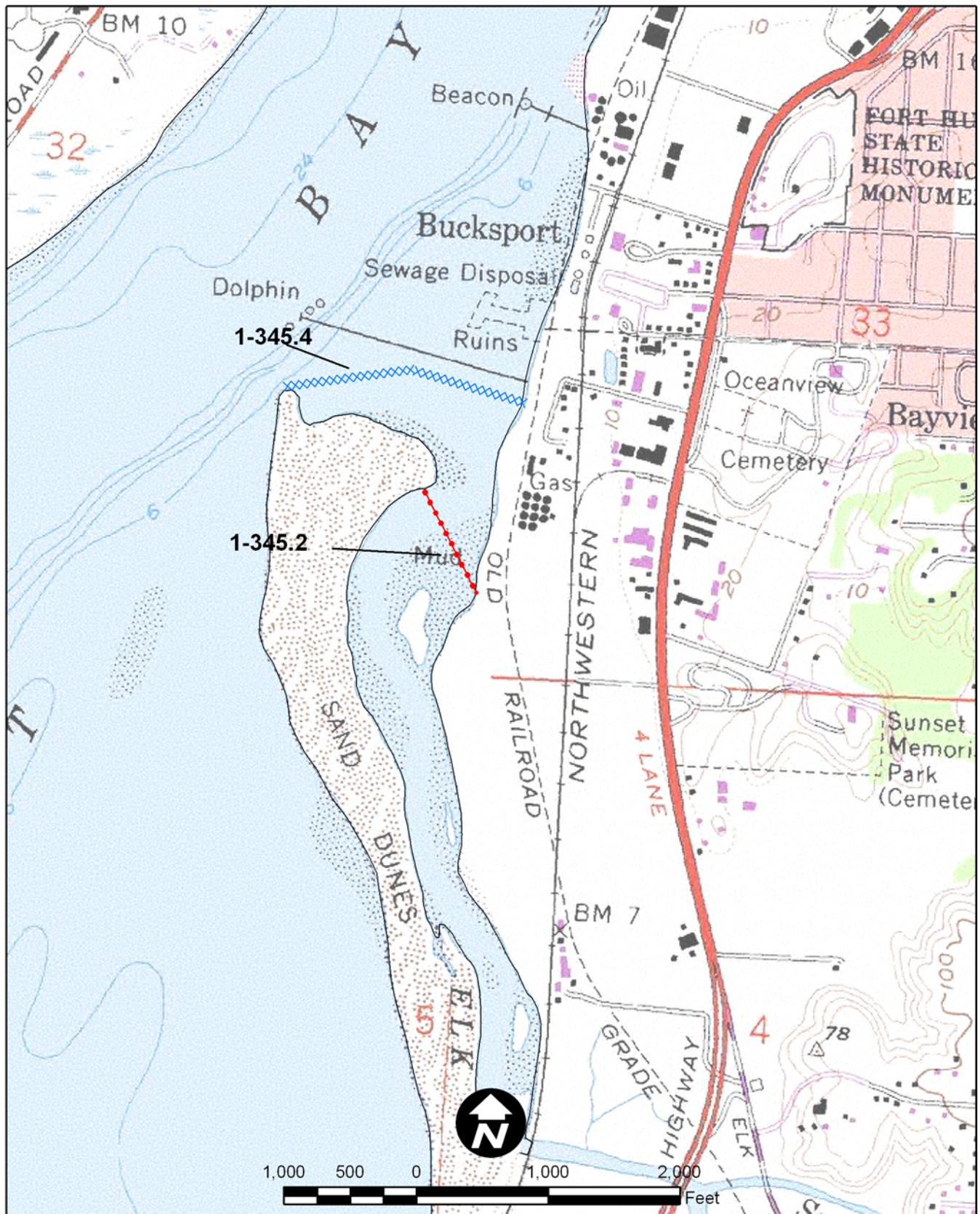
Launching, Loading, Docking and Services Available: Access is possible from Humboldt bay with shallow draft vessels recommended for this response location.

FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

There are small parking lots near the foots of Hilfiker and Truesdale streets where local response equipment and supplies could be staged for a response at this site.

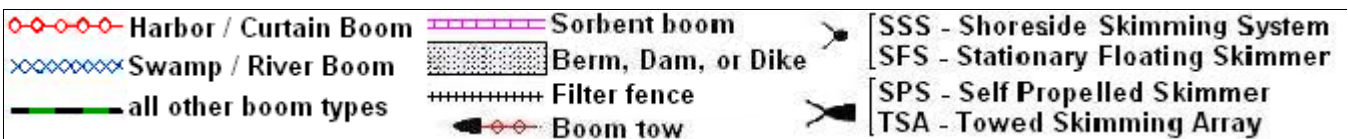
COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



CDFG-OSPR & USCG Site: 1-345 Name: Elk River and Marsh

Kris Wiese (OSPR) & Jo Sanders (OSPR) Date: July 17, 2008



County: **Humboldt**
 USGS Quad: **Cannibal Isl., Fields Landing**

Thomas Guide Location
 CA Road Atlas
 NOAA Chart: **18622**

Latitude N Longitude W
 40 42' 30" 124 15'

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This is the protection site to collect oil that is moving south in Hookton Channel and into south Humboldt Bay. This response site is located at the Fields Landing Boat Ramp and on private property just north of the boat ramp. Large estuary complex with extensive marshes, eelgrass meadows, and sheltered tidal flats exposed at low tide.

SEASONAL and SPECIAL RESOURCE CONCERN

The south bay is home to the Humboldt Bay National Wildlife Refuge which provides habitat for 100's of species and 1000's of individual birds including migrating waterfowl.

RESOURCES OF PRIMARY CONCERN

This is a high bird use area year round. Extensive eelgrass meadows.

Birds are a concern throughout the year. Coastal seabirds, wading birds, waterfowl. Important for brant en route to breeding grounds. California brown pelican (04-11), Marbled murrelet (FT,SE). Raptors including Bald eagle (SE), Peregrine falcon, Osprey; all (01-12).

Harbor Seal haul outs for molting and pupping in this area
 river otters

Anadromous salmonids: Coho (FT,ST) and Chinook (FT) salmon, Steelhead (FT) and Coastal Cutthroat (SSC) trout:

- spawning runs (08-06)
- juveniles/smolts (pass through bay)

Larval and juvenile fish use area as rearing habitat

Invertebrates

Benthic invertebrates including several recreationally important clam species

Eelgrass meadow

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Cultural, Historical, and Archeological sites are known to exist in the area, however, the exact locations of these sites must be ascertained by contacting the Native American Heritage Commission at (916) 653-4082 and State Office of Historical Preservation (916) 445-7000, and/or Ms. Vicki Bates, Coordinator of the North Coast Information Center (707) 482-1822.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
O		Pacific Gas and Electric	(707) 444-6545
T		Humboldt County Parks	(707) 445-7651
E		Humboldt County Sheriff	(707) 445-7251
C	Briana Fraley	Table Bluff Reservation Wiyot Tribe	(707) 733-5055
O	Suzie Howser Dock Master	Humboldt Bay Harbor District	(707) 443-0801
T	Eric Nelson Refuge Manager	Humboldt Bay NWR Complex	(707) 733-5406
O	Troy Nicolini	National Weather Service Woodley Island	(707) 442-2171

ADDITIONAL SITE SUMMARY COMMENTS:

For further information about coastal access in this area, please refer to the California Coastal Commission's California Coastal Access Guide. For photos of the coastline in this area, please refer to the California Coastal Records Project (www.californiacoastline.org).

1-350 -A Site Strategy - South Humboldt Bay

County and Thomas Guide Location

CA Road Atlas Humboldt

NOAA CHART

18622

1-350 -A

Latitude N

Longitude W

40 42' 30 124 15'

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Oiling of slough and marsh complexes in South Humboldt Bay could cause long term damage to important habitats including Humboldt Bay National Wildlife Refuge. Avoid anchoring in eelgrass beds.

HAZARDS and RESTRICTIONS:

Extensive mudflats, swift current in channel

SITE STRATEGIES

This strategy will be most effective on flood tides to prevent oil from reaching further south. Vessel traffic in channel may complicate response.

Strategy 1-350.1 Objective: Deploy boom to strand oil on shore.

Deflection boom oil to collection sites or stranding sites in the south bay.

Strategy 1-350.2 Objective: On water recovery

On water recovery using either a towed boom array or with a towed barge skimmer.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	tvpe and gear	Boom boat	Skiffs punts	Skimmers No	Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
1-350.1	1200	0	0	0	5	22+lb Danforth anchors	2	0	2	SSS	0	10	
1-350.2	100	0	0	0	0			2	1	SBS	0	2	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

- Access to the shores of South Humboldt Bay are limited by extensive wetland areas and mudflats, with the exception of the developed areas around Fields Landing and King Salmon.

- East side of South Bay: Go south on U.S. hwy 101 from Eureka to the King Salmon exit M.P. 73.046 and go west on Buhne Drive to King Salmon (town) and the Bay. Go south on U.S. hwy 101 from Eureka to the Fields Landing exit M.P. 70.844. Take Railroad Avenue to its end, the site of Fields Landing Boat Ramp.

- West side of South Bay: Go south on U.S. hwy 101 to Hookton Road overpass M.P. 68.116. From stop sign, continue west (straight ahead) on Hookton Road to Table Bluff Road. Continue in same direction. The road will become South Jetty and run the length of the South Jetty.

- Access by boat: Two hoist type facilities are available in King Salmon. A launching ramp (end of Railroad Ave.) and travelift (end of Depot Drive) are available in Fields Landing. This is the protection site to collect oil that is moving south in Hookton Channel and into south Humboldt Bay. This response site is located at the Fields Landing Boat Ramp and on private property just north of the boat ramp.

LAND ACCESS: Vehicle access to Fields Landing Boat Ramp

WATER LOGISTICS: Depth limitations may complicate vessel access.

Limitations: depth, obstruction

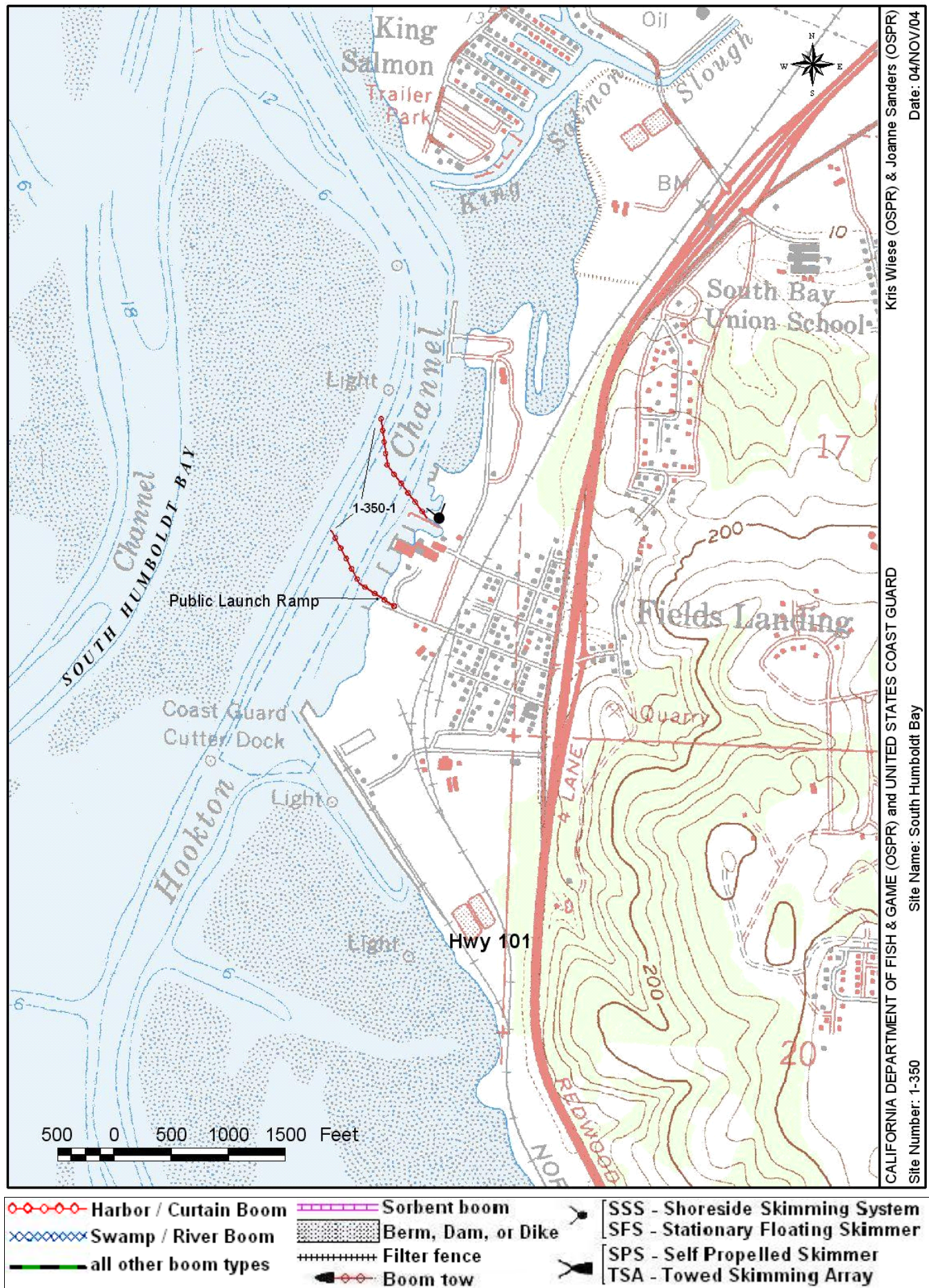
Launching, Loading, Docking Boat lauch at Fields Landing
and Services Available:

FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Large parking lot at Fields Landing Boat Ramp may be appropriate for local staging.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



County: **Humboldt**

USGS Quad:

Thomas Guide Location

CA Road Atlas

NOAA Chart:

Latitude N

Longitude W

Last Page Update :

SITE DESCRIPTION:

This site includes the tidal estuaries of White Slough and Salmon Creek where they enter South Humboldt Bay. This site is within Humboldt Bay National Wildlife Refuge. Large estuary complex with extensive marshes, eelgrass meadows, and sheltered tidal flats exposed at low tide.

SEASONAL and SPECIAL RESOURCE CONCERN

This is a high bird use area year round.

RESOURCES OF PRIMARY CONCERN

Extensive marsh and salmonid habitat lie upstream of this area. The estuary has extensive wetlands and saltmarsh that would be difficult to clean-up if oil enters that environment.

Wading birds, shorebirds, waterfowl (01-12), migratory waterfowl and shorebirds (10-04); brant (10-06), Kingfishers, Egrets, raptors including bald eagle (SE), peregrine falcon, osprey (01-12). Double crested cormorant nesting colony on Teal Island (03-08)

harbor seals, river otters

Anadromous salmonids: Coho (FT,ST) and Chinook (ST) salmon, Steelhead (ST) and Coastal cutthroat (SSC) trouts:

- spawning runs (08-06)
- juveniles/smolts (02-08)

Tidewater goby (FE,SSC), FWS Critical Habitat

Longfin smelt (ST)

Pacific herring spawn on eelgrass (11-03).

eelgrass beds

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Cultural, Historical, and Archeological sites are known to exist in the area, however, the exact locations of these sites must be ascertained by contacting the Native American Heritage Commission at (916) 653-4082 and State Office of Historical Preservation (916) 445-7000, and/or Ms. Vicki Bates, Coordinator of the North Coast Information Center (707) 482-1822.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
C	Briana Fraley	Table Bluff Reservation Wiyot Tribe	(707) 733-5055
T	Ken Griggs Deputy Refuge Manager	Humboldt Bay NWR Complex-24 hr cell #2	(707) 499-2397
O	Suzie Howser Dock Master	Humboldt Bay Harbor District	(707) 443-0801
T	Eric Nelson Refuge Manager	Humboldt Bay NWR Complex-24 hour cell	(707) 498-5406
T	Eric Nelson Refuge Manager	Humboldt Bay NWR Complex	(707) 733-5406
O	Troy Nicolini	National Weather Service Woodley Island	(707) 442-2171

ADDITIONAL SITE SUMMARY COMMENTS:

For further information about coastal access in this area, please refer to the California Coastal Commission's California Coastal Access Guide. For photos of the coastline in this area, please refer to the California Coastal Records Project (www.californiacoastline.org).

1-352 -A Site Strategy - White Slough & Salmon Creek

County and Thomas Guide Location

NOAA CHART

1-352 -A

Latitude N Longitude W

CA Road Atlas Humboldt

CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

Oiling of slough and marsh complexes in South Humboldt Bay could cause long term damage to important habitats including Humboldt Bay National Wildlife Refuge. Avoid anchoring in eelgrass beds. Contact HBNWR for assistance prior to initiating any response here.

HAZARDS and RESTRICTIONS:

The soft mud can be challenging to boom deployment workers.

SITE STRATEGIES

Extensive mudflats may complicate vessel access at low tide. Recommend boom be deployed at higher tides. Several large tide gates on HBNWR may warrant additional protective boom to protect marsh habitats. Contact HBNWR staff for guidance.

Strategy 1-352.1 Objective: Prevent oil from entering the slough

Use 600' of hard boom, deliverable to site at Hookton Slough small boat launch off Hookton Road. Small, shallow draft vessel can be launched here to deploy boom to site.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
1-352.1	600	0	0	0	0	0	0	0	4 Anchor stakes	6	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

This site can be reached by driving south from Eureka on Highway 101. Take the Hookton Road exit from Highway 101 at the south end of the Bay. To the Hookton Slough trailhead, drive 1.2 miles west on Hookton Road; the parking area is on the north side of Hookton Road. This site includes the tidal estuaries of White Slough and Salmon Creek where they enter South Humboldt Bay. This site is within Humboldt Bay National Wildlife Refuge.

LAND ACCESS: Vehicle access to levees on both sides of Salmon Creek.

WATER LOGISTICS: Extensive mudflats may complicate vessel access.

Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: small skiff launch off Hookton Road

FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Small parking lot at boat launch may provide local staging needs

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS: Locked gates to access levees, contact HBNWR.



County: **Humboldt**
 USGS Quad: **Humboldt Fields Landing**

Thomas Guide Location
 CA Road Atlas
 NOAA Chart: **18622**

Latitude N Longitude W
 40 43' 45" 124 15'W

Last Page Update : 7/1/1996

SITE DESCRIPTION:

This site includes the 4.5 mile long sand spit running from the the base of Table Bluff at the south end of Humboldt Bay to the jetty. Land management includes the South Spit Cooperative Management Area managed by BLM, Humboldt Bay National Wildlife Refuge on the bay side, and Table Bluff County Park at the south end of the spit. Access to the north end of DFG's Eel River Wildlife Area is also possible here. Fine to medium grain sand beach on the ocean side, backed by vegetated dunes. Mudflats on bay side.

SEASONAL and SPECIAL RESOURCE CONCERN

This is a high bird use area year round.

RESOURCES OF PRIMARY CONCERN

The bay side of the spit has extensive wetlands and saltmarsh that would be difficult to clean-up if oil enters that environment. Nesting snowy plover on beach side.

Waterfowl, shorebirds, waterbirds, wading birds (01-12), large numbers of brant (10-04)

California brown pelican (04-11), Snowy plover (FT)(01-12), FWS Critical Habitat, nesting period (03-08). Nests directly on sand within dunes.

harbor seals in bay

eelgrass beds in bay

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Cultural, Historical, and Archeological sites are known to exist in the area, however, the exact locations of these sites must be ascertained by contacting the Native American Heritage Commission at (916) 653-4082 and State Office of Historical Preservation (916) 445-7000, and/or Ms. Vicki Bates, Coordinator of the North Coast Information Center (707) 482-1822.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
O		BLM 24 hour dispatch	(707) 268-2000
T		CA Dept of Fish and Game Wildlife Area	(707) 445-6493
T		Humboldt County Parks	(707) 445-7651
T		Bureau of Land Management	(707) 825-2300
T	Randy Brown	US Fish and Wildlife Service	(707) 822-7201
C	Briana Fraley	Table Bluff Reservation Wiyot Tribe	(707) 733-5055
T	Eric Nelson Refuge Manager	Humboldt Bay NWR Complex	(707) 733-5406
O	Troy Nicolini	National Weather Service Woodley Island	(707) 442-2171

ADDITIONAL SITE SUMMARY COMMENTS:

For further information about coastal access in this area, please refer to the California Coastal Commission's California Coastal Access Guide. For photos of the coastline in this area, please refer to the California Coastal Records Project (www.californiacoastline.org).

1-360 -A Site Strategy - South Spit

County and Thomas Guide Location

CA Road Atlas Humboldt

NOAA CHART

18622

1-360 -A

Latitude N Longitude W

40 43' 45 124 15'W

CONCERNS and ADVICE to RESPONDERS:

Last Page Update :

Oiling of sloughs and marsh complexes on bay side could cause long term damage to important habitats. Avoid anchoring in eelgrass beds. Contact BLM prior to initiating any response or clean up here due to presence of snowy plover on beach and dunes.

HAZARDS and RESTRICTIONS:

Locked gates between dusk and dawn.

SITE STRATEGIES

This site is best protected by preventing the oil from arriving here, when possible. Off site response options including dispersants should be considered.

Strategy 1-360.1 Objective: Prevent spilled oil from floating to this site.

Conventional on-scene response is not possible at this site. Protect with off site measures only.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no tvpe and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment or comment No and kinds	staff deploy	Staff tend
1-360.1	0	0	0	0	0	0	0	0	0		

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Go south on U.S. hwy 101 to Hookton Road overpass M.P. 68.116. From stop sign, continue west (straight ahead) on Hookton Road to Table Bluff Road. Continue in same direction. The road will become South Jetty Road and run the length of the South Jetty terminating at the entrance channel. The gate key can be obtained by contacting BLM or the Humboldt County Sheriff if necessary to access site after hours. This site includes the 4.5 mile long sand spit running from the the base of Table Bluff at the south end of Humboldt Bay to the jetty. Land management includes the South Spit Cooperative Management Area managed by BLM, Humboldt Bay National Wildlife Refuge on the bay side, and Table Bluff County Park at the south end of the spit. Access to the north end of DFG's Eel River Wildlife Area is also possible here.

LAND ACCESS: Call Humboldt County Sheriff for key to gate

WATER LOGISTICS:

Limitations: depth, obstruction n/a
Launching, Loading, Docking n/a
and Services Available:

FACILITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Small parking lot at Table Bluff County Park and additional lots along South Jetty Road may provide local staging needs

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

